Clinical Medicine
and
Surgery

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Dr. Abraham Jacobi

THE generation which created the revolution of '48 probably included more great men than has any other single generation in European history, and among the greatest of these powerful figures stands Abraham Jacobi, who was born at Hartum bei Minden, Westphalia, May 6, 1830.

Jacobi was educated at the German Universities of Griefswald and Gottingen and received his degree as a Doctor of Medicine from the University of Bonn in 1851, shortly after which, being deeply implicated in the revolutionary movement, he was imprisoned on a charge of high treason.

In 1853, after two years of incarceration, he escaped to England, where he attempted to practice medicine at Manchester. This effort proving unsuccessful, he decided, like his famous compatriot Carl Schurz, to come to the United States, where he first settled in Boston but later moved to New York.

He soon became well and favorably known in his profession and he whimsically relates that his first patient came two weeks after he first hung up his shingle, because his name had been favorably mentioned in the patient's hearing. That was in November 1853.

In 1860, the New York Medical College established the first chair of pediatrics in this country and Dr. Jacobi was invited to accept the professorship. This position he held until 1864, when he took a similar appointment in the University of New York. In 1870 he became professor of pediatrics in the College of Physicians and so remained until 1902, retiring as emeritus professor.

In 1873 he was married to Dr. Mary Putnam, a daughter of G. P. Putnam, the New York publisher, herself a person of note and the first woman to be admitted to the New York Academy of Medicine and to be a delegate to the State Medical Association. She was for ten years a professor in the Woman's Medical College of New York, and for three years a member of the faculty of the New York Postgraduate School, as well as being the author of a number of medical treatises.

During his long medical career, Jacobi received practically all the honors which can come to a medical man. He was twice president of the American Pediatric Society and the first chairman of the Section on Diseases of Children of the American Medical Association; President of the New York State Medical Society in 1882; of the New York Academy of Medicine from 1885 to 1889; of the Association of American Physicians in 1896; and of the American Medical Association in 1912-13. He was also an officer and member of many learned societies both here and abroad.

Though of German birth, Dr. Jacobi was a most loyal and enthusiastic American and when, in 1893, he was offered the professorship of pediatrics in the University of Berlin, he refused with the statement that he was rooted in the American medical profession which he had observed to evolve until it was become equal to any on the globe.

As an author, he takes his place among the great literary men of the medical profession, both as to quantity and quality of his literary output. His first work (with E. Noeggerath), "Contributions to the Diseases of Women and Children", was, as he himself states, a financial failure and resulted in a loss to the authors of $800. His subsequent efforts were, however, well rewarded. He wrote not only on pediatric subjects but also on general pathology and therapeutics and on medical history. He was a well-known lecturer and speaker along many lines, and was the first to devote serious attention to the vital subject of infant feeding. His collected works were published in 1909.

But Jacobi was known and loved not alone as a wise, successful and famous physician and sympathetic and enlightening teacher but also as a helpful and inspiring philosopher and an active and useful citizen. He took the keenest interest in all questions of national import and was a strong opponent of prohibition and a lively advocate of birth control.

To show something of the love and reverence in which he was held by his contemporaries we are reprinting a poem entitled "A Symphony of Deeds", written by H. Edwin Lewis, which was published some years before Jacobi's death.

A life so clean, with service as its cue,
Such ceaseless effort for the sick, forlorn,
That tongue nor pen can give the homage due,
Save to thank God that such as he was born!

How many hearts have filled with grateful cheer
At words of hope that he alone could give.
How many times his skill has banished fear,
And taught some erring one the way to live.

A true physician, thinking naught of self,
His entire life a symphony of deeds,
Untouched by baser aims or greed of pelf,
His only aim to succor human needs.

And thus he stands, the Nestor of us all,
Beloved, admired, with every man his friend,
Long may it be before he hears the Call.
Far in the future may his Journey end.

Dr. Jacobi was actively interested in his profession up to the day of his death. In 1918, at the age of 88 years, he attended the meeting of the American Medical Association and was a conspicuous figure at all of the sessions. He was in good health up to the very end, which came suddenly at his summer home at Lake George, New York—the former home of his old friend and countryman Carl Schurz—on July 10, 1919.

So passed a man who made an incalculably profound impression upon medical thought and practice, here and abroad and who was, for many years, the Nestor of his profession in America—A great physician and teacher; a great and valuable citizen; a broad, kindly, helpful and capable all-around *human being*.

What is an excessive burden for the powerful? What is distant for the enterprising? What is foreign to the educated? Who is a stranger to those who speak kindly?—Sanskrit Proverb.

LOOSE TALKING—AND THINKING

One of the great advantages which accrue from frequent and regular attendance at medical society meetings and participation in the discussions is that one becomes habituated to thinking clearly and logically and to expressing one's professional ideas in a sound, dignified and understandable manner.

The man, particularly in a rural community, who confines his professional discourse to talks with his patients is in serious danger of permitting his vocabulary to deteriorate to the level of that used by uninformed laymen. If he hears pneumonia constantly alluded to as "lung-fever"; malaria as "fever and ague" or "chills and fever"; boils and carbuncles as "risings"; all aches and pains of whatever nature, arising in the bones, joints and muscles, as "rheumatism", he is apt, sooner or later, to adopt this loose phraseology—unless he constantly counteracts this tendency by intercourse with his professional confrères. He may even sink to the expressional level of the poet who, though he *may* have had a definite idea, certainly failed to express it rationally when he sang:

"I can not think a sweetest thing
To sit him in the gay parterre
And sniff one up the perfume sweet
Of every roses buttoning there."

Thousands of people in this country have no idea of the location and relations of their internal organs and, particularly, they have no names by which to allude to their

various generative organs and bodily functions except the vernacular appellations which have been vulgarized by prurient use in salacious stories and in back-alley conversation.

If we talk down to them in these matters we are missing one of our splendid educational opportunities. That does not mean that we should discuss their cases with them in classical Latin or in language which is incomprehensible to them. The man who can not convey a scientific truth in language which can be understood by a high-school student—or even an eighth-grader—does not know his subject so well as he should. We should teach our patients to discuss their cases with us in simple but scientific terms. Such instruction once given will frequently do away with much embarrassment and open the way to freer and more intelligible descriptions of symptoms, thus greatly improving our case histories. It will also add a new dignity to the conversation of our patients and tend to lead them away from vulgarity in speech and thought.

Another aspect of the matter is that any person who habitually speaks loosely and inaccurately is almost sure, after a longer or shorter time, to fall into loose and inaccurate ways of *thinking*, as well, and then his chances for real intellectual improvement grow slimmer with every year that passes.

The one sure prophylactic and corrective for conversational and mental asthenia and deterioration is to *express* your ideas in the presence of those who have the intelligence and training to check up on the character and value of the ideas and on the clearness and elegance with which they are expressed. This remedy may be applied by scientific presentations and discussions in groups of physicians, or by writing out your ideas for publication. Both have advantages and neither should be neglected.

Every physician should be a symbol to his community of scientific accuracy, sympathetic understanding and tolerance, dignified (not pedantic or sanctimonious) speech and behavior, and broad general culture and should always be a force for lifting people to a higher level, instead of permitting himself to sink to a lower one; and the men who are earnestly striving to do all of these things are doing much to restore our profession to its former standing among the people and to discourage them from resorting to quacks and charlatans.

There is nothing that will "do" unless it is done as well as you are able to do it; otherwise it is slop work, and degrading in itself.—Annie Besant.

THE BROMIDES

A number of the bromides are widely used in medicine, chiefly those of sodium, potassium, strontium, lithium and ammonium, and, since their action is essentially the same, they may be considered together.

All of the bromides are crystalline salts, readily soluble in water but less so in alcohol, and having a somewhat brackish, saline taste.

Physiologic Action—The bromides act as *depressants* to the motor and intellectual portions of the *brain cortex*, slowing the processes of thought and lessening motor irritability. They exercise a *sedative* action on the sensory tracts of the *spinal cord*, thus decreasing reflex action and the ability to recognize pain; they also depress the peripheral parts of the sensory nerves.

The effects on the other body functions, following therapeutic doses of these drugs, is negligible, except that they may cause indigestion and constipation by their irritating effect on the mucous membranes and by hindering reflex activity. They escape from the body unchanged and *very slowly* in all of the secretions—sweat, urine, milk, tears, etc. Tissue waste is decreased while the body is under their influence.

Bromism.—Acute poisoning by the bromides is very rare, as the toxic dose is enormous—far beyond the amount given therapeutically. Partly because of its slow elimination, however, the continued use of these drugs not infrequently results in a form of *chronic poisoning* known as bromism.

The symptoms of this condtion are: Generalized acne, beginning on the face; foul breath; loss of sexual power; general dullness, heaviness and somnolence; muscular weaknes, with slowing of all movements; loss of taste and hearing and a blunting of the intellectual faculties. Sometimes psychotic symptoms appear, such as irritability, moroseness, melancholia, hallucinations, or even acute mania and homicidal tendencies. Dangerous suffocative bronchitis occasionally develops, or the patient may become cachectic and resemble a case of typhoid.

The acne can often be prevented by giving arsenic, in the form of Fowler's solution, along with the bromide; and naphthol or phenyl salicylate (salol) is said to be helpful in preventing the gastrointestinal symptoms.

Therapeutic Uses.—The bromides are used in medicine solely for their depressant effect on the nervous system, and are of value in *any case showing over-excitement of the nervous protoplasm*, but never where nervous symptoms are due to depression.

For many years the classical treatment of *epilepsy* has been by the use of bromides, but the dangers of bromism and the superior effectiveness of luminal have given this latter drug preeminence in these cases. The use of luminal may, however, be fortified by giving 20 grains of sodium bromide, three times a day, in cases where it seems necessary.

These salts have their greatest field of usefulness in conditions characterized by nervous irritability, such as *hysteria, spasmodic contractions, convulsions, starting at sudden noises* and *night-screaming* in children, *insomnia* due to overactivity of the thought centers and similar conditions.

They are also valuable in many disorders of the reproductive organs, such as *nymphomania, satyriasis, seminal emissions*, many of the nervous symptoms accompanying pregnancy and the menopause, certain types of *dysmenorrhea* and *headache*, and some cases of *urinary incontinence* due to irritability of the vesical sphincter.

The distressing symptoms accompanying acute *pharyngitis, laryngitis* and the *laryngeal crises* of tabes are often much ameliorated by the use of the bromides, but it is of little or no service in whooping cough.

As a prophylactic against seasickness the bromides, given in 5 to 10-grain doses, three times a day, for several days before sailing, are as helpful as anything. They are also useful in the *vomiting* of pregnancy or after operation. For *migraine* and *neuralgia*, bromides, combined with *caffeine* (5 grains of bromide, 2 grains of caffeine and 5 grains of antipyrin, repeated as necessary) are almost specific; and bromides alone will often prevent the symptoms of *cinchonism* which frequently follow the use of quinine and the salicylates.

Value of Different Salts.—The bromide of potassium is generally believed to be the most powerful, but it is also the most irritating and frequently causes gastric disorders if given in large doses or for long periods.

The salts of sodium, strontium, lithium and ammonium require only slightly larger doses and are much better tolerated by most patients. The best results are frequently obtained by combining equal parts of the bromides of potassium, sodium and ammonium.

Administration.—The dose of the bromides varies from 5 to 120 grains (0.3 to 8.0 Gm.) a day, given in three parts, after meals. The average dose is from 10 to 20 grains (0.6 to 1.3 Gm.) three times a day. They should never be given at more frequent intervals, as they are slowly absorbed and slowly eliminated. After the patient is under their influence the dose may be reduced. The best way to give them is in watery solution, with syrup and flavoring matter if this seems desirable.

Contraindications.—Bromides should never be given in conditions of nervous depression or asthenia (post-typhoidal or post-puerperal insanity); in senile softening of the brain; in inflammatory conditions of the gastrointestinal tract; nor to patients who are subject to acne.

Many of the younger physicians look upon the bromides as "old-fashioned" remedies, but men of experience know that he who neglects to use these drugs when they are indicated is depriving his patients of much relief to which they are entitled.

It is a great satisfaction to know, when a man has finished eating, that the food he has taken will never cause him any sickness, but will keep him in perfect health.—*Louis Carnaro.*

THE COUNCIL ON PHYSICAL THERAPY

The biggest thing that has been done to restore physical therapy to its proper place in the armamentarium of reputable physicians and to put it on an enduring and ethical foundation was the organization of the Council on Physical Therapy of the American Medical Association.

Such a step was necessary in order to protect the medical profession and the public from fraud, undesirable secrecy and misleading advertising in connection with the manufacture and sale of physical therapy apparatus, and will be welcomed by the high-class manufacturers of such apparatus as well as by those who use it.

For more than a year the Council has been formulating the rules under which it will work, and these rules, now announced, may be briefly summarized as follows:

1.—*Nature of Apparatus.*—Full details of the construction and operation of the device must be supplied.

2.—*Efficacy.*—Evidence of effectiveness must be furnished.

3.—*Advertising.*—The advertising must be satisfactory to the council and must not suggest self-treatment by the patient.

4.—*False Claims.*—No false or misleading statements will be tolerated.

5.—*Unwarranted Therapeutic Claims.*—Statements as to therapeutic value must be reasonable and provable.

6.—*Dangers.*—The limits of safety in using any device must be clearly stated.

7.—*Standardization.*—Every accepted device must pass tests formulated by the Council.

8.—*Objectionable Names.*—Proprietary names will be recognized only in the interest of the public welfare. In general their use will be discouraged.

9.—*Patented Apparatus and Protected Names.*—The Council must be furnished full information regarding patents and trade marks.

10.—*Useless Devices.*—No unscientific and useless devices will be accepted.

11.—*Policies of Firms Detrimental to Rational Therapeutics.*—The policies of the firms manufacturing physical therapy apparatus will be subject to scrutiny.

From time to time, descriptions of accepted apparatus will be published by the council and as these accumulate they will form a reliable guide for physicians who contemplate the purchase of equipment of this character.

This work should have the hearty support of all right-minded physicians and manufacturers.

"Let us develop the resources of our land,
Call forth its powers,
Promote all its great interests,
To see whether we also,
In our day and generation,
May not perform something to be remembered."
—Daniel Webster.

MEDICAL PRACTICE DIRECTED BY CONGRESS

If some rank outsider—some layman who had not the slightest inkling of a knowledge of therapeutics—should tell you that you must not give any of your patients more than a tenth of a grain of strychnine or three grains of quinine in one day, or must not use more than two ounces of ether for any surgical anesthesia you would, perfectly properly, tell him to go to—the place that is paved with good intentions. You'd get right excited about it, too!

And yet, that very thing—in substance—has been done to every member of the medical profession without evoking the overwhelming storm of protest that might have been expected. The matter has even been carried up to the Supreme Court by some hardy souls, and that august body has decided against us—*by a vote of five to four*—but little fuss has been made in medical circles.

Alcohol either is a medicine or it isn't. There is no middle ground. If it isn't a medicine, doctors have no business to prescribe it at all: If it is a medicine, nobody has any legitimate business to tell any doctor how much of it his patient is to be given within a certain period of time.

The medicinal value of alcohol has been the subject of a good deal of controversy, from time to time, but we believe that a large majority of physicians have seen many cases in which its administration produced decidedly beneficial results. This is particularly true in elderly people, whose general condition and vigor is materially improved by small, daily doses of this drug and in cases of delirium tremens.

Those who believe in the therapeutic value of alcohol find themselves hampered, however, by a provision, written into the notorious Volstead law by a group of high-handed cranks who considered murder a childish pastime compared to imbibing a friendly glass of liquor, by reason of which they are forbidden to prescribe more than one pint of 100-proof whisky or its equivalent for any one patient within a period of ten days. Are we all so familiar with that unjustifiable and iniquitous interference with our professional freedom of judgment that we are willing to take it lying down?

Those who felt that such a law was an outrage and were prepared to disregard it and defend their position in court now have not a leg to stand on. The American Medical Association and Dr. Samuel W. Lambert, of New York, have carried the question to the court of last resort and the law has been held to be constitutional—*by a bare majority.*

Many physicians feel that those among their patients who need alcohol do not need *whisky*, but would receive greater benefit from a sound wine or some malt liquor such as beer. We cannot, legally, prescribe beer at all, under the Volstead act, and in Illinois—probably in other states, also—it is unlawful to prescribe wine. That is on a par with someone telling you that you may give a dose of morphine by mouth, if you feel that you must, but under no conditions must you administer it hypodermically.

We are law-abiding citizens and we are certain that most physicians are in the same class. We may have our personal opinions as to the wisdom of trying to make a nation moral by act of Congress and about the merits or demerits of alcohol as a beverage, but the editorial pages of a medical journal are no fit place to air those opinions. Our present remarks have solely to do with alcohol as a *medicine* and with the insufferable audacity of those medically ignorant laymen who presume to tell the graduates of our finest medical schools how to practice their profession.

Our only recourse, now, lies in *changing the law*, and upon that we should concentrate our forces—unless we are satisfied that Congress is right in thinking that we are ignorant or untrustworthy. If every physician who feels as we do about this matter would write to his Senators and Congressmen and *tell them what he thinks*, and then get the medical societies to take action in the matter we ought to be able to get results. We understand that Senator Hawes, of Missouri, has introduced an amendment to this effect. *Tell* (*not* ask) your representatives to support that.

Look up your state laws, too, and if they need fixing, get after your assemblymen and *get them fixed*. We can do it, unless we are wearing a wishbone where the backbone ought to be.

Meantime, do not forget that if Congress can "get away with" a thing like this they are likely to feel that they can do what they please to us. Remember that the outrageous Kindred Bill (H. R. 9962) is not dead, but only sleeping. No one can tell when some chuckle-headed nincompoop will dig it up and foist it upon us. Look up the September, 1926, number of CLINICAL MEDICINE (page 623) and see what we said about that odoriferous measure, and then *get busy* on the whole flock at once.

Until society becomes intelligent it can never be happy or free.—Albert E. Wiggam.

SCRAPPING THE ARMY AND NAVY

There are three instrumentalities which protect us from personal assault; the force of public opinion, the police and our good right arms.

Today, in civilized countries, the consensus of opinion is decidedly against the practice of intimidation, mayhem and murder as a means of gaining a livelihood or for the satisfaction of real or imagined personal wrongs, and the man who indulges in them has, in general, a weedy row to hoe—conditions in Chicago notwithstanding.

There are, however, considerable numbers of those who disregard public opinion entirely and do not allow it to restrain them from direct violence or criminal and homicidal carelessness. We keep up a force of policemen and firemen, in our towns and cities, to restrain the depredations of people like these; and, in spite of the pressure of public opinion in the direction of decency (it is not yet so strong nor so unanimous as it should and will be), we have heard of no community of any size which felt ready to dispense with its police and fire departments.

Where no organized protection is available, or when, as sometimes happens, it breaks down or fails to function adequately, the individual is forced to the primitive expedient of defending his person and his property by the exercise of his own strength and skill. If these are above the average, he has a good chance to drive off or overcome his attackers and protect his life and his goods. If he is weak, untrained and unprepared for emergencies, his chances are slim.

At the present time, in the face of valiant efforts by considerable numbers of people, there is no coordinated and definite public opinion against war. There is, to be sure, much hazy and more or less sentimental *feeling* that war is a crime and should be dealt with as such, but the great warriors are still the national heroes.

With no organized and effective world-wide sentiment against international conflict it would seem that the need of a national police and fire department is even more imperative than that for such preconcerted protection against minor local depredations; the more so because, though many men are sufficiently powerful and dexterous in the use of their bodies to thwart the attack of an unarmed bandit, few or none are able to cope with a physical weakling or mental incompetent provided with an automatic pistol or a machine gun. History has repeatedly demonstrated that, in a nation, even more, perhaps, than in an individual, courage, physical strength, high ideals and cleverness are a poor protection against steel-jacketed bullets and gas bombs, or whatever was used for the same purposes in days gone by.

With these preliminary suggestions, we are ready to propound the question: has

the time come for the United States to scrap its Army and Navy? We shall not answer this question, but we urge everyone who has the best interests of his country, his family and himself at heart to consider wisely, deeply and well and come to a *positive decision* in the matter, and then *act* upon that decision, promptly and forcibly.

Those who reach the conclusion that it is safe and wise and glorious to do away with the country's policemen and firemen need do nothing, for the disintegration of our forces of national defense *is now well under way* and will be completed within a few years unless something is done to stop it.

Those who feel, after mature consideration, that we still need adequate protection in the midst of a war-like world have much active work cut out for them if they hope to achieve results before it is too late.

Many wholly uninformed and soft-headed persons are making a great deal of noise in a variety of places; those who know the truth, as a matter of first-hand knowledge, are effectively muzzled (remember Colonel Mitchell!); and no less a personage than the President of the United States has, if he is accurately quoted, expressed his deliberate opinion that the time has come to begin disbanding our Navy—it is already pretty far along that road. A formidable array, truly, against those who hold a contrary opinion!

Those who doubt that the Army and Navy are on the skids can readily verify the statistics in the matter by writing to their Congressmen. The law authorizes an army of a certain size, and then Congress appropriates about *half* enough money to keep it up, the result being that, while most people are congratulating themselves that we have an Army of effective size, the fact is that the men actually in uniform are not much more than half the number on paper.

Morale in the Army is slipping; the number of desertions is appalling and is steadily increasing. One cannot wonder much when one thinks that, to feed each of these active, hearty young men, their benevolent Government allows about *thirty cents* each day. The issue uniforms which, some years before the War, were made of good material and well tailored, so that a man might be proud to wear one, are now so shoddy and shapeless that the self-respecting enlisted men must have at least one uniform made which will present a decent appearance, paying for it out of his monthly stipend of $30.

Discipline is largely a thing of the past and courts martial are, in most instances, a joke. Red tape is spun out to such lengths that the findings and sentence of the officers who tried the case are frequently thrown out because of some error in the wording of the court records.

Medical service, in the Army and Navy, is far below the standard of sound effectiveness, because the number of medical officers in both Services is insufficient to do the work that needs to be done. The Navy authorizes 819 medical officers; while the Surgeon General has repeatedly reported that the least number of men required to do the work properly would be 950. Moreover, the report for 1926 shows that losses exceeded gains by ten, forty-three officers having resigned their commissions during the year. Admiral Stitt's report for 1926 is interesting reading.

The result of such a state of affairs is that the men of the Navy lost 1,219,031 days from sickness during the past year. Much of this could have been prevented by adequate periodic examinations, which are out of the question, in many places, because of the shortage of physicians.

Conditions in the Army are almost, if not quite, as bad. In 1923, officers to the number of 153 (including thirty medical officers) resigned their commissions, and conditions are not notably improving, if they are not actually growing worse.

The reason for all this is not that the quality of the nation's manhood is deteriorating, but that the Army and Navy have been "step-children" for years. Because the officers and enlisted men of the Public Services are *actually*, if not legally, disfranchised and gagged; and because the people in general do not appear to care a copper what becomes of them, they have become the football of peanut politics. Whenever it has seemed necessary to cut a few hundred thousand dollars off some other appropriation in order to fatten up the "pork barrel" it has been the Army and Navy that have been starved, because their men were of no political use or danger to the men in power.

• The men in command and in the ranks of our Public Services are considerably above the average in intelligence, industry, patriotism, initiative and self-reliance. They work as few civilians in the same social status feel required to work. They accomplish unbelievable things with antiquated and insufficient equipment.

But there comes a time when human nature will no longer be ground between the millstones of political chicanery and public indifference.

Has the time come to scrap our Army and Navy? Face that question and decide it *now*, and having come to a decision, *do your duty*.

The greatest danger of the socalled democratic nations is that they have no sense of discipline, no sense of order, no sense of obedience; without these no nation can be great.—Annie Besant.

TWENTIETH CENTURY PHYSICS

The people of the nineteenth century lived in a thought-world which now seems incomprehensible to those who have come into the use of their minds within the last quarter-century. To them, matter was composed of hard, tight, solid little balls called atoms, which were totally different in all the different elements. These atoms never did or could change in any way; and the total amount of matter in the universe was always constant.

Strangest of all, they had evolved a complete and universally applicable scheme for the interpretation of all physical phenomena and felt that they had come to the end of all qualitative discoveries. They lived in a static universe.

The blow which made the first crack in their shell of scientific complacency fell before the end of their century with the discovery of x-rays by Roentgen, in 1895, though it was some years before the immense significance of this discovery began to emerge. Without it, the discovery of the electronic structure of the atom would have been impossible.

The details of the seven epoch-making discoveries in physics during the past generation are beyond the grasp of any but highly trained physicists, but they have changed our whole conception of life and the universe.

Thanks to the discovery of radio-activity we are living in a *dynamic* universe, where everything is changing and evolving all the time. Our atoms are solar systems in miniature—planets, known as electrons, revolving around suns, known as protons. Our matter is no longer changeless and permanent in quantity and quality, but, because of Einstein's researches, is seen as merely one of the many manifestations of energy, and interchangeable with them in the cosmic scheme.

Our energy impulses do not all travel in waves, as our fathers believed, but we are beginning to measure some of them in "quanta"; and the "Compton Effect" appears to be based upon the fact that energy discharges of sufficiently short wave length can shoot through space like bullets.

Even the Newtonian laws of mechanics, when submitted to searching analysis with the microscope, appear to be unsound, for periodic motions seem not to progress continuously but to be built up out of unitary elements.

Our twentieth century world is not so smug and simple as was that of the nineteenth century—but it is infinitely more exciting! We now admit that the formula for the interpretation of the cosmos is still beyond our grasp, and because of that admission, the goal of discovery is pushed far out into the mists of the future and, though the discoveries of the past thirty years have probably exceeded in importance those of all the preceding ages, we can set out boldly in search of new relations in physics, unhampered by the mandates of "authority" or the cramping restrictions of tradition.

Leading Articles

The Diagnosis of Eczema

By ISAAC R. PELS, M. D., Baltimore, Md.

THE diagnosis of eczema and allied conditions would not seem to be of any special importance or significance, inasmuch as so many physicians are prone to name almost any common or uncommon dermatosis "eczema". Such diagnosis or impression is usually based on the principle that the eruption is red and therefore inflamed, and that the patient suffers from intense itching. It is not an uncommon experience to interview patients affected with widespread psoriasis, lupus vulgaris (uncommon), and even acne and syphilis, and to learn that these conditions have been diagnosed—by a physician, according to the patient's assertion—as eczema.

There are, however, a number of common diseases of the skin, such as scabies, pediculosis corporis, urticaria, etc.; and some uncommon ones, such as lichen planus, dermatitis herpetiformis, and the neurodermites (to mention only a few), which are characterized by both inflammation and by intense and distressing itching.

It is the purpose of this commentary to stress a few of the outstanding features which, in the writer's opinion, are practically always characteristic of eczema—as the term is commonly understood or interpreted—and to give some adequate reasons for such statements as are about to be made.

Nomenclature

The situation raises at once the time-honored question of the identity of eczema and of the term dermatitis, due to external agents. It is not the object of this communication to enter upon this polemic other than to express the opinion of full agreement with the views advanced some time ago by Highman[1], both in the literature and in discussion. He has shown in a convincing manner that the clinical and the pathologic changes of what is ordinarily recognized as eczema, and what we call, for example, dermatitis venenata are identical.

There has been, of course, a decided opposition to the use of the term dermatitis except when qualified, because it is too general and, being interpreted as an inflammation of the derma, it could with proper reason be applied to any dermatosis in which inflammation plays a part. This would even include syphilis.

The confusion of names, with special reference to eczema, is best illustrated when one considers the list of terms, qualified by various appellations, as exhibited in any textbook. For example, take the following—eczema as qualified by reference to primary or to secondary (or both) lesions.

1.—Morphology: Eczema vesiculosum
papulosum
fissum
squamosum
crustosum
verrucosum,
papillomatosum, etc.
2.—Color: Eczema rubrum
3.—Age: Infantile eczema
4.—Function or physiologic state: Eczema seborrhoeicum
5.—Location or distribution: Eczema manum
Eczema ani
Eczema scroti
Eczema crurum
6.—Type of etiology: Eczema parasitarium
Eczematoid ringworm
7.—Occupa., profes., etc.: Eczema occupationalis
Eczema e professione
Baker's eczema (or itch)
8.—Unclassified: Eczema madidans
Eczema erythematosum
Eczema craquele
Eczema nummulaire
9.—Association with other pathologic conditions: Eczema varicosum
Eczema intertriginosum

This is merely a partial list of the variations in the picture, so diverse and so complicated as to make an already obvious confusion worse confounded.

Added to all this, one finds a well-recognized group of eruptions, described originally by Engman and others[2] by the name of infectious eczematoid dermatitis, which is always associated in some manner with infection or with some pustular condition. This eruption, if one consults merely the photographs in various textbooks (Sutton has good examples), does not differ essentially from the picture whose characters conform to a general conception of eczema.

It should be remembered also that there are various stages in the course of eczema, which are properly termed acute, subacute and chronic; and it is not our purpose to

discuss here the variations of differences in these stages. Suffice it to state that, with a little care in observation, one can usually satisfy himself that the essential factors which make up the entire picture of the eruption may generally be verified.

Nor is it our purpose to make a plea for discarding terms which good usage for very long periods has given a permanent place in our nomenclature. Various writers, notably Scholtz[3], have, from time to time, stressed this aspect of the question and have deplored a situation and a circumstance which have served to bring this aspect of nomenclature into the light of criticism; and these facts have perforce invited a logical and natural prejudice against the entire dermatologic domain.

Simplified Nomenclature

It would appear too presumptuous and perhaps too radical to propose a few terms to cover the entire range of variations of eczema in the partial list quoted above. Nevertheless, we are tempted to suggest that, after a comprehensive and understandable definition of the term, we may attempt to qualify it by the use of a proper designation based on etiologic factors and to eliminate entirely the term dermatitis.

For example, we might speak of eczema in terms such as eczema solare (due to sunlight—the familiar sun-burn); eczema calorica (due to heat); eczema seborrhoeicum (associated with or due to excessive seborrhoea); eczema pyogenicum (associated with or produced by pyogenic organisms—a term which might readily replace that of infectious eczematoid dermatitis); dermatophytic eczema (the entire group of inflammatory conditions produced by ringworm infections); eczema intertriginosum (the inflammatory condition associated with intertrigo); eczema venenata (the eruption produced by any or all vegetable poisons); eczema occupationalis (the eruption produced by chemical agents or associated with occupation); and so on.

Where the etiologic factor is not known or the evidence for such cause not sufficiently presumptive, the term might be qualified, for example:

1.—Infantile eczema (the eruption occurring in infancy and associated with internal disorders—not always definite—as well as with external agents, such as improper hygiene, heat and cold, or temperature changes.)

2.—The large group of subacute or chronic eczemas occurring as eruptions associated with internal conditions (neurogenic, gastrointestinal, endocrine, allergic, etc.); not omitting the external factors, such as poor hygiene, trauma, etc., which probably can produce the eruption through interplay of these two groups.

Eczema and Dermatitis

Quoting Pusey (p. 311, 4th edition), "It makes no difference in the essential character of a dermatitis that the irritant happens in some cases to be discernible and in others not.

"Leaving out these unessential qualifications, we cannot avoid the position that *eczema is dermatitis;* and, so far as the lesions in the skin are concerned, this statement represents the fact. The eruption of eczema is the same as that of dermatitis, and as the only essential feature of eczema is its eruption, we are forced to the definition that the term eczema connotes various forms of simple dermatitis. By the qualification of 'simple' is meant that the process is such as can be excited by ordinary external irritants.

"In the description which follows—and no departure is made from the accepted description of eczema—we shall be simply defining various forms of dermatitis."

If, however, we essayed to be more radical we might retain the term dermatitis, qualified properly as to etiology, and also retain the term eczema to cover the large group of conditions where there appear to be both known and *unknown* or presumptive factors as responsible for them—an "interplay" (quoting Highman) of external and of internal factors.

The Clinical Picture

It appears to me, however, that the more important thing to stress is the clinical picture. In my own experience I have found that, with a few exceptions, all these many variations of eczema and of socalled dermatitis due to external agents, present so many points in common that the diagnosis can be made on these objective symptoms only. Further, one sees among the common diseases of the skin the majority of cases of eczema confined usually to locations which are exposed to irritation: namely, the face, ears, neck and extremities (hands and arms especially). A careful inquiry will usually elicit the fact that external agents of chemical or physical nature have been responsible for the eruption. This obviously applies to personal hygiene (soap and water); to clothing and other wearing apparel (containing irritants such as wool or dyes); to moisture of the skin and to temperature changes; to shoes, hats, etc.; to chemicals contained in cosmetic preparations, to other obvious irritants; especially to any

treatment instituted by a physician or by the patient (a frequent cause of aggravating an already established eruption).

If then it is conceded that eczema and practically all conditions of socalled dermatitis due to external irritants have, in the main, an identical clinical picture as well as identical pathologic changes, we may at once consider what makes up this picture.

Characteristics of Eczema

According to Brocq,[4] the primary lesion is always a vesicle. This, of course, accounts for the invariable secondary lesion, crusting. The primary lesion most frequently combines a papule with vesiculation; but one can always find evidence of vesicle formation. Consequently, we may consider that the ordinary or usual example of eczema, seen most commonly in the subacute stage, consists of the following factors:

1.—Vesicles and papules which are discrete, grouped and also, usually, confluent. They form

2.—An *ill-defined*, fairly large patch, the center of which is formed by confluence of the primary lesions; and the ill-defined edge produced by arrangement of the same type of lesions, either in discrete or in grouped fashion, usually both. There is an inflammatory reaction of the derma, usually deep pink or red in color, most commonly confined to parts exposed to trauma or to irritation; and exhibiting further

3.—Crusts (or fissures) and sometimes scales, depending upon the duration. On palpation there is

4.—Considerable infiltration.

Summed up, we find an inflamed eruption composed of papulovesicles, forming *ill-defined* patches—always patches—more or less crusted, and sometimes scaling as well; and on palpation having some infiltration. This characteristic of "ill-defined" is hardly, if at all, stressed in most textbook descriptions.

Differential Diagnosis

There are a number of dermatoses which might give confusion in differential diagnosis; but they are not frequently met with. Herpes zoster occurs as ill-defined (but sometimes well-defined) patches. It has a unilateral distribution, most frequently on the body, along a nerve trunk, and is composed of deeply-seated, grouped vesicles, mostly of equal size and located on a highly inflamed (erythematous) base. It is frequently associated with pain (especially in adults); and is of self-limited duration. Eczema (or dermatitis) usually causes severe itching.

Dermatitis herpetiformis also occurs in ill-defined patches on many areas of the body, on the face, and on the extremities. The lesions are, however, of various types: macules, papules, vesicles (which may be large—bullae), together with pigmentation. They appear in various stages of evolution; are not so closely grouped as to be confluent; and they are usually associated with intense itching. The history of variation in eruptive stages; the generalized distribution; and the intense itching and chronicity serve to make the diagnosis.

It is true that some types of eczema or dermatitis are not ill-defined. This refers particularly to affections of the skin caused by certain fungi, including the yeasts. The socalled baker's itch or baker's eczema is frequently a well-defined patch, having all the other characters mentioned above. Mycelia-forming organisms and yeast organisms have been reported as having been found in such areas. And, of course, ringworm organisms can give the same picture. But what we usually see is the original eruption, traumatized and irritated by treatment, by washing with soap and water and by scratching or rubbing. Consequently we most frequently encounter a typical eczema or dermatitis which is patchy and ill-defined, the cause of which is usually a fungous agent, and which, secondarily, has been so changed by various factors that the eczema or dermatitis has been grafted, as it were, upon the original picture.

Summary

In summary, then, the usual case of eczema or dermatitis may be diagnosed by the outstanding features of an ill-defined, patchy, inflammatory reaction; usually located on exposed parts; composed of papulovesicles with crusting, primarily, and sometimes with scaling; and with moderate infiltration.

This should serve as an "approach" to diagnosis in ruling, at once, whether one is dealing with an eczema (forming perhaps 30 percent of all common skin diseases) or with some other dermatosis. The diagnosis of some of the other common skin diseases presupposes a fair knowledge of primary lesions and of other outstanding characters. Thus this comment should serve to lighten the burden of diagnosis; for that is, after all, in most instances, the key to a proper rationale of therapy.

It is not the object of this commentary to explain what is meant by the term eczema, except in so far as such statements would bear upon the points in diagnosis. This question has been so comprehensively handled by W. A. Pusey in his textbook that there is, within our present knowledge, little to add. One can deduce, however, that Pusey did not endeavor to differentiate the clinical picture from that of dermatitis due to external agents; nor is there any satisfactory discussion given of the question of individual susceptibility in dermatitis of external nature.

We wish, rather, to stress the points of importance in the objective symptoms, the actual clinical findings. In this connection it would be of interest to speculate on the reasons for the ill-defined, patchy characters, in contrast to the well-defined patches, for example, of psoriasis, pityriasis rosea, dermatophytosis (ringworm), etc. The formation of papules and of papulovesicles can seemingly be attributed to the apparent irritation upon the capillary and smaller blood vessels of the derma; but the general method or process of the attack is not so readily explained.

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Toxic Goiter*

By DIETRICH KLEMPTNER, M.D., Chicago

THE clinical application of metabolism determination, the use of iodine and the lowered mortality of thyroid operations have recently stimulated the interest in toxic goiter. Under the head of toxic goiter we distinguish exophthalmic goiter and adenomatous goiter or adenoma with hyperthyroidism, and a combination of the two forms. Clinical and pathologic facts justify this distinction, though owing to the occurrence of masked or atypical cases the boundaries are uncertain and fluid.

Simple goiter plays an important rôle as a predisposing factor, rendering the thyroid a *locus minoris resistentiae* and the carefully studied etiologic factors of simple goiter concern us here in this connection: the lack of iodine in water, soil and food; the deficiency of calcium and phosphorus; the lack of sunshine to bind the calcium; contamination of water, etc.

Little is known of the direct causes of exophthalmic goiter and the usual etiologic groups are requisitioned, as heredity, neuropathology, endocrine disturbances, infections—acute and chronic.

To infections, whether acute or chronic, only an indirect rôle can be assigned in the causation of toxic goiter, even if they immediately precede an acute outbreak of the condition. They probably undermine the resistance and put the thyroid under special strain. The latter factor is also active in pregnancy. But there is one factor that stands out prominently and that is: the frequency of emotional trauma in the histories of these patients.

Quite a few toxic adenomas are induced by the injudicious use of iodine.

Etiology

The seat of the essential pathology is generally placed in the thyroid; removal of the goiter brings about recovery. How about the recurrences? Not enough of the thyroid has been removed! But if the basal metabolism rate goes down to a minus and none or little thyroid tissue is left? There is a difficulty. Some authors believe the sympathetic system is primarily involved, but no convincing evidence has been brought forward. Sewing the phrenic nerve to the sympathetic plexus and providing a steady flow of stimuli to the thyroid gave no results. A primary involvement of the brain has been blamed, but our methods are not adequate to prove pathology there.

It has been assumed that in exophthalmic goiter there exists an excessive and altered secretion of the thyroid gland. Plummer believes that under an excessive stimulation the gland gives off an insufficiently iodized thyroxin that acts as a poison and is responsible for the typical exophthalmic signs, while associated with it is an excess or more rarely an insufficiency of normal thyroxin. Relatively large doses of iodine check the output of the altered product and bring

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about an improvement of the exophthalmic signs—the nervousness, the eye signs, the crises.

To illustrate the relationship of the two secretions, let me quote two examples:

A patient has the typical exophthalmic signs and a basal rate of +30. The use of Lugol's solution carries the rate up to +80, but the patient feels rested and better. Excessive stimulation does not favor the optimum output of thyroxin. With the stimulation of the thyroid gland reduced by Lugol's, more thyroxin is secreted, accounting for the higher metabolism rate, while the improvement in the clinical picture shows that the altered product is neutralized.

Another patient has a recurrence following a thyroidectomy: a progressive exophthalmos and nervousness, with a basal rate of —14. The use of Lugol's solution in this case checked the eye signs and the nervousness and lowered the basal rate to —28, the patient developing slow speech, thick skin and other signs of a deficiency of normal thyroxin. In addition to Lugol's, which controls the exophthalmic signs, he is given enough thyroxin to bring his metabolic rate up to average and he gets along well.

This effect of iodine is temporary. Twenty percent of the exophthalmic cases do not react to iodine at all or only slightly.

Toxic adenoma is a state of pure hyperthyroidism and all clinical manifestations can be accounted for on that basis.

Iodine and Toxic Goiter

Fifteen to thirty minims of Lugol's solution a day, given to an exophthalmic goiter case that has not previously had any iodine, has a very remarkable effect: the excessive stimulation of the gland is checked, the metabolism goes down and the clinical signs show a decided improvement. This continues for about eight days, when, without any intermission, the patient slowly begins to get worse again, until, inside of a month or longer, he is in the same or worse condition than before he started taking iodine. If the iodine is resumed, the progress is slowed down, but not checked.

In a resting adenoma, toxicity can be induced by the use of iodine, and the toxicity persists. It seems that in toxic adenoma, large doses of iodine have a beneficial temporary effect and are at present used extensively as a preparatory measure, preceding operation, in all forms of toxic goiter, the action of the iodine being watched with the utmost care.

The goiters resected from exophthalmic patients are characterized by diffuse hypertrophy and hyperplasia and are accurately diagnosed by the pathologist in a vast majority of cases. The preoperative use of iodine can be told by changes in the goiter characteristic of the resting state: regressive epithelial changes and the presence of colloid.

Adenomas are recognized readily enough, whether diffuse or nodular, but the histologic structure permits no judgment as to the functional state of the gland.

Clinical Signs of Exophthalmic Goiter

The clinical picture of exophthalmic goiter is made up of a number of syndromes: the syndrome due to the altered secretion-product—eye signs, nervousness, crises; the hyperthyroid syndrome — vascular goiter, cardio-vascular signs, high basal metabolism, bulemia, loss of weight, hot skin, perspiration, tremor, muscular weakness, especially of the quadriceps cruris; vagotonic signs — hyperchlorhydria, diarrhea; signs due to involvement of the adrenals — bronzing; pancreatic signs — lowered carbohydrate tolerance; ovarian signs — dysmenorrhea.

Of the eye signs, the protrusion of the eye ball is late to appear and late to disappear. It is due to stimulation of Müller's orbital muscle by the sympathetic fibers. The pulsation of the arteries of the fundus has the same significance as capillary pulsation elsewhere. The stare is another important eye-sign.

Nervousness is one of the striking symptoms of exophthalmic goiter. The patients are emotional, ready to laugh or to cry, perform incessantly purposeful, but useless movements. They claim a feeling of well-being, yet tire easily; their movements are clumsy, wasteful of energy. The picture may proceed to mental aberration, delirium.

A crisis may at any time, without warning, interrupt the course of Graves' disease, and it does not matter whether the form is mild or severe. The patient develops hyperpyrexia and general or local erythema; he thrashes about; is prostrated; the pulse is small, frequent; there is vomiting and diarrhea; the patient becomes dehydrated, the eye-balls soft. Death supervenes, if the condition is not checked.

The Heart and Blood-Vessels

The tachycardia and increased pulse-pressure are a compensatory reaction to the

high metabolism and not a sign of pathology on the part of the heart. More work is demanded of the heart. The volume output per beat of the heart is increased and, as a result, if the peripheral vascular system is elastic, the systolic pressure grows higher and the diastolic pressure becomes lower. The diastolic relaxation is extreme, and following a remission, the diastolic pressure goes higher and the systolic lower.

If the peripheral arteries offer a greater resistance, both systolic and diastolic pressures grow larger, though the diastolic to a smaller extent, as a result of the larger volume output of the heart per beat; the pulse pressure in this instance is also increased.

In the vagotonic cases the heart rate may be slow, but according to J. M. Read the pulse pressure is larger in proportion.

Over the heart are heard functional murmurs. The arteries give the same signs as in aortic insufficiency. The capillaries may pulsate.

Fibrillation is present in one-fourth of the cases, and in one-half of these it is permanent. Extra-systoles are very common. Paroxysmal tachycardia occurs in only 1 percent of the cases.

A characteristic feature of the goiter heart is that, though perfectly rhythmical, it may begin to fibrillate following a strain, such as an operation.

The longer the toxic state has lasted and the older the patient is, the greater are the chances that the myocardium is damaged.

All the signs of exophthalmic goiter may be fully developed or they may be rudimentary. *None is pathognomonic.*

The course of Graves' disease is characterized by remissions and exacerbations. It begins slowly and ends in an explosion: the gland is not educated. Following a remission, another exacerbation may occur, with the acute stage not so severe: the gland is educated.

The clinical picture of toxic adenoma is that of an excess of thyroxin secretion. The nervousness, the eye-signs, the crises are missing in pure forms. The course is slowly progressive: it may take months for a patient to notice that there is anything wrong with him and he will seldom attribute his complaints to a goiter that has for many years proved to him its harmlessness. There are no remissions. The patients are older and degenerative changes in the heart and kidneys are more common.

Diagnosis

The masked and atypical forms make the diagnosis difficult. The reactions to adrenalin and atropin and sugar tolerance determinations are at present superseded by basal metabolism determinations. The latter are very helpful in properly classifying neuro-circulatory asthenia or autonomic imbalance, a condition that may duplicate the features of exophthalmic goiter, except the high metabolism. A girl of 16 had suffered for six weeks from nervousness, palpitation, insomnia, tremor; she was underweight, had a pulse of 120, questionable eye signs; thyroid just palpable and not vascular. Her basal metabolism, repeatedly tested, was about +8. She did not react to iodine. Diagnosis: Autonomic imbalance.

A similar case reported by Dr. Buford, before the Chicago Medical Society, had an exophthalmos and definite loss of weight with a thyroid just palpable; basal metabolism +5. Thyroidectomy was followed by recovery. It must be admitted that some of these cases with an average metabolism reading in the course of time become exophthalmic patients. There is some difficulty in the interpretation of the early stage.

Hypothyroidism may clinically simulate exophthalmic goiter. A group of adolescent girls has been reported that suffer from nervousness, palpitation, lack of concentration, tachycardia, vascular goiter. Their metabolism rate is minus. *Small* doses of iodine cure these cases promptly. Surgery would have done them irreparable damage.

Incipient tuberculosis has many features in common with hyperthyroidism and a mistaken diagnosis is disastrous. The exophthalmic cases have a greater appetite, more palpitation, less or no fever and a higher basal metabolic rate.

Without exophthalmos and goiter, cases may give the impression of being chronic heart disease, especially aortic, with recurrent attacks of decompensation.

In the pregnant, it may be important to make a differential diagnosis between toxemia of pregnancy and Graves' disease. A woman of 29 presented herself at a Chicago hospital, four months pregnant and suffering from orthopnea, edema, restlessness, vomiting. There was protrusion of the eye-balls and a vascular goiter, Pulse 130, of poor quality. Blood pressure about 210 over 120. Albumen and casts in the urine. The basal metabolic rate was +37. The vomiting, the twitchiness, the high blood pressure, the albumen and casts in the urine, the edema suggested toxemia

of pregnancy as well as Graves' disease. The goiter, the eye signs, the nervous phenomena were very definitely in favor of Graves' disease. The metabolic rate of +37 seemed low in view of the severity of the condition, but was accounted for by the general edema which always lowers the metabolic rate. At operation a hydatiform mole was delivered. The patient was doing poorly. One hundred minims of Lugol's solution caused the patient to rally; but she died a congestive heart death a week later.

Treatment

Prevention of endemic goiter will probably minimize the number of cases of toxic goiter. Removal of foci of infection is always good policy. There is no direct causal treatment.

A proper evaluation of the efficiency of therapeutic measures could be obtained by checking the results against the spontaneous course of the disease. H. Mackenzie stated, fifteen years ago, that 50 percent of the exophthalmic cases get well, 25 percent remain invalids and 25 percent die. Kessel, Hyman and Lande, of the Mount Sinai Hospital of New York, observed a series of cases for longer periods of time, treating them by "skillful neglect". Eighty-two percent of the cases were returned to their previous economic station.

Surgery is at present considered to give most relief in the shortest time. The surgical mortality has come down from 20 to 30 percent to a general average of 7 percent, or to less than 1 percent in some of the large clinics. The factors responsible for the lowered mortality are: first, perfected technic. Injury of the recurrent nerve and compression of the trachea by hemorrhage are common causes of immediate operative mortality. Another important factor is the use of iodine before and following the operation. Goiter operations are not performed for emergency indications. The goiter patients used to be poor risks. They are sensitive to lack of oxygen. The heart is easily exhausted. They are subject to postoperative hyperthyroid reactions with a notoriously low resistance to infections. Iodine reduces the metabolic rate, quiets the heart, prevents postoperative crises, raises resistance to infection. The results from the Mayos are: 65 to 75 percent recoveries; 1 to 4 percent frank failures. Quick results and short convalescence cannot be denied to surgery. We are not so sure regarding the permanency of the results, as recurrence may happen many years following the operation. It has been suggested by a group of California physicians to do a total thyroidectomy in desperate cases, to do away with recurrences, and to place the patient permanently on thyroid feeding. They report uniformly good results. Not enough time has passed for sound judgment of this procedure.

The x-ray yields fair results and must be used in patients that are unsuitable for surgery. Two-thirds of the cases respond to treatment by x-ray. Convalescence is long; many cases come ultimately to operation and a long delay may damage the myocardium. If three treatments are not productive of results, further x-ray treatment is discontinued.

Medical treatment acts as an adjuvant to surgery. Iodine and repeated metabolism determinations have made the goiter patient a good surgical risk. The optimum time for operation is determined on the declining metabolism curve and the patient kept saturated with iodine throughout the postoperative reaction. In many cases recurrences can be kept under control by the use of iodine continued for months and secondary operations can be avoided.

Digitalis has its use for a decompensated heart. Rest, mental and physical, is an old and valuable therapeutic measure.

High caloric diet is rational in view of the high metabolic rate, and it is a good sign if a patient can be kept from losing weight or is made to gain weight. Proteids are kept low on account of the dynamic effect they have on the metabolism rate.

While the ultimate results, considering the spontaneous course of the disease, are not brilliant, the immediate control of the condition is striking. Crises can be arrested or checked, corneal ulcers and panophthalmia can be prevented and eyesight is saved.

Iodine is a drug potent for good or for mischief and its use in goiter should be as carefully controlled as that of insulin in diabetes.

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The Doctor's Income Tax Return

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THE income tax laws have been written to apply generally to all taxpayers. There are, therefore, very few provisions covering a specific profession or line of work. However, paradoxical as it may sound, a number of the general provisions specifically affect the doctor's income tax return. In addition, there have been several rulings issued by the Income Tax Department that refer directly to the members of the medical profession.

Rates and Exemptions

First in importance, of course, is the matter of rates and exemptions. There are two kinds of taxes imposed on individual incomes—the normal tax and the surtax. The normal tax is now 1½ percent on the first $4,000 of income in excess of exemptions; 3 percent on the next $4,000; and 5 percent on the balance. Surtaxes do not apply except on an amount of income in excess of $10,000, and the rate is 1 percent on the income between $10,000 and $14,000; 2 percent on the next $2,000; 3 percent on the next $2,000, etc., the rates graduating up to as high as 20 percent on the income in excess of $100,000.

The personal exemptions were increased by the 1926 law. A single person is now entitled to an exemption of $1,500, and a married person or the head of a family to $3,500. All persons are allowed an additional exemption of $400 for every dependent. A return does not have to be filed by a single person whose income is not in excess of $1,500, or by a married person whose income is not in excess of $3,500.

There is one basic exception to this rule to be noted. Where the gross income is in excess of $5,000, a tax return must be filed, irrespective of the amount of net income, even though there may, in fact, be a net loss.

Earned Income Credit

Doctors will be particularly interested in the socalled earned income provisions of the law. Professional income is earned income, and it receives a 25 percent reduction from the regular rates. This would mean a substantial concession in many cases were it not for a vital limitation that is imposed in applying the 25 percent credit. The maximum amount that may be considered as earned income is arbitrarily fixed at $20,000. The largest possible saving to a married person, as a result, is $206.25. This maximum saving is computed as follows:

Maximum earned income	$20,000.00
Exemption to married person	3,500.00
Balance	$16,500.00
Normal taxes of 1½ to 5 percent	$ 605.00
Surtax	220.00
Total tax	$ 825.00
Earned income credit, one-fourth of $825.00	$ 206.25

The $206.25 is applied to reduce the tax that would otherwise be payable, and that is computed on the actual net income and not only the earned income.

Office Expenses

Leaving the general question of rates and computations, let us consider some of the concrete items that may enter into the determination of taxable income in the case of physicians.

All income is taxable, except income that is expressly exempted from tax, such as interest on Government bonds. All disbursements, however, may not be deducted. Generally speaking, only disbursements in connection with the doctor's practice are deductible. For example, there would be the rent of the office and whatever disbursements are involved in the upkeep of the office. Frequently, the physician uses part of his home as his office. In that case, a reasonable apportionment of the rent is permitted as a deduction. Where the house is owned by the practitioner, taxes and interest on mortgages are deductible in full, and a reasonable apportionment can be made of the other expenses in connection with the house, such as coal, janitor service, repairs, depreciation, etc.

Substantial expenditures are frequently necessary in order to furnish a fully equipped office to suit the requirements of the profession. The cost of such equipment can be recovered for tax purposes through *annual depreciation* deductions, based upon the useful life of the equipment. Thus, if $1,000 was spent for furniture for the office, and it is estimated that the furniture could be used for the purpose for five years, one-fifth of its cost, or $200, could be deducted in the return for each of the five years.

Cost of Instruments

The cost of instruments and other equipment, like x-ray devices, may be treated in the same manner. Deductions should be taken for them through the annual depreciation allowances. However, where the instruments are generally known to have a comparatively short period of usefulness because of their very nature, the cost can ordinarily be deducted in the year when the purchases are made. Office supplies of one sort or another would generally come under this head.

Subscriptions to periodicals and professional publications are deductible, as are in fact all other items which can be reasonably said to form part of the cost of producing professional income. The cost of a library, however, could not be deducted in one year, but would be provided for through the yearly depreciation amounts.

Automobile Expenses

Traveling expenses in connection with one's practice are, of course, a valid deduction. The cost of operating an automobile, if used entirely for professional purposes, is deductible. When used partly for personal purposes, the cost of operation should be apportioned. The depreciation of the automobile can be taken into consideration as an expense. So also may any loss on a trade-in. It is important, however, that satisfactory records be maintained to substantiate the expenses. The Treasury Department has time and again disallowed automobile expenses, not on the ground that they were not incurred but solely for the reason that no records were produced showing exactly how much the expenses were. Mere estimates are not permitted.

Method of Keeping Books

While on this point of records, perhaps the most important single item affecting the taxable income of the practitioner is the method of keeping his books. There is the *accrual method*, where the billings are considered as income whether or not yet collected, and expenses are considreed as deductions if applicable to the year, even though paid for in another year. There is also the *cash basis* where only the actual fees received and expenses paid enter into the computations. The return must be made in accordance with the manner in which the books are kept, and so if it is desired to report on the cash basis, unpaid clients' bills should be kept merely as a memorandum record, and should not form an integral part of the books.

The average practitioner's requirements do not involve an elaborate set of books. As a matter of fact, so few records are necessary that books are completely overlooked all too often, and then there is considerable embarrassment when the Government audits the return. The Government knows that the activities of the average practitioner are correlated closely with his home and personal expenditures. For that reason, it requires that some records be kept whereby the professional and the personal income and expenses are distinguished. Unless such record is kept, the practitioner may find himself deprived of the benefit of his proper deductions.

Many doctors follow the practice of keeping separate check books, one for professional expenses, and the other for disbursements on personal account. Others find this neither feasible nor expedient. Irrespective of the actual system employed, the important thing is to have records that will show the *professional* income and expense.

When proper records are kept, the preparation of the income tax return becomes a comparatively simple matter. The tax form is now more or less familiar to taxpayers, and so, unless an individual has capital gains or losses, or has considerable business activity outside of his profession, the preparation of the return gets down merely to entering the information from the books to the proper place in the tax form.

A New Theory In Endocrine and Hormone Physiology

By THEODORE HUBERT LARSON, M.D., Milwaukee, Wis.

AFTER many years of close observation, clinically as well as surgically and in laboratory work, I have made a few discoveries that lead me to a new theory that I have found to be of great value in restoring health. This theory may be briefly stated thus:

First:—That all male endocrine glands are strictly male, and female glands are essentially female.

Second:—That endocrine products will not function normally in those of opposite sex.

Third:—That endocrines do not function singly, but in groups of two or more.

Fourth:—That sex and character can be molded and controlled by the administration of the proper endocrines at the proper time.

Clinical Findings

The findings which have led to these conclusions may be summarized as follows:

Findings No. 1.—All glands are sex glands because they are contaminated, so to speak, with each other's endocrine secretions. All internal secretions are picked up by the blood and carried to all parts of the body. During the course of this travel they form groups by combining with their affinities. This we call a *hormone*. The hormone has a great affinity for, and exercises its influence upon, the glands represented in this group or complex.

In so doing, the ovarian secretion enters into the thyroid, pituitary, adrenals and every gland in the female. Thus we find ovarian secretion in all female tissues. That is what makes a female a female. That is why a female has a female mind, not a male mind. That is why a female's voice is so different from that of a male. That is why a female's instincts are so different from those of a male.

The same is true of the male. All male tissues, all male cells, are (or should be) saturated with the secretions of the gonads, prostate and all of the male endocrines. Therefore, they are strictly male in character and characteristics, which are altogether different from those of a female.

When I administered a mixture of male and female gland substance, I observed a syndrome manifestation which was a *reaction*—not a normal function.

I then gave the same complex of glands from one sex. There was no reaction and no unpleasant syndromes or symptoms, but a gradual improvement in function.

Findings No. 2.—Opposite sex endocrines will not combine to form a hormone. When male and female glands are mixed and given to a patient there will be a reaction. The patient will feel various syndromes and think he is really getting the desired effect; when the fact remains that a normal function does not produce any syndromes or unpleasant feelings.

I administered a mixed male and female gland substance, over a period of sixty days, to a very nervous female patient. During this time we were getting reactions and syndromes throughout the entire treatment. Ten days after this was discontinued, I found the patient in the same nervous condition as when we commenced.

I then selected a complex of female glands only and administered it. There were no reactions whatsoever, but in two weeks the patient had made a marked improvement. This was continued over a period of ninety days with the best of results; the patient continued feeling well for many months after we had discontinued the treatment.

I have observed similar results in a large number of cases, over a period of many years, and will say, that when administering an endocrine or endocrine complex and getting a reaction or systemic disturbance it is because an unbalanced hormone is being produced, which only interferes with normal function.

Findings No. 3.—By giving a single endocrine substance I observed that reactions followed, and not a normal function. This was given over a period of time with no improvement. The patient suffered mental disturbances and cold extremities, following oophorectomy. I then combined ovarian, thyroid, mammary and pituitary substance (all female glands). There were no reactions following this complex and the results obtained were excellent.

I found it was impossible to correct these endocrine deficiencies by giving only ovarian substance; but when I gave an endocrine

complex of all glands involved in this affinity group, I observed a rapid and marked improvement.

Let us take insulin for an example. It is a single endocrine product. Give it to a diabetic for sixty days. As a substitute it will aid in the assimilation of sugar; but withdraw it and we find a return of glycosuria. Our reason for this is that a single endocrine cannot and will not stimulate its own secretory cells.

On the other hand, administer a balanced hormone or endocrine complex in which the pancreas has an affinity and there will be a stimulation and revitalization of the dormant cells of Langerhans, with a restoration of function.

Another example:—A masturbator soon produces a gonad deficiency and because of the fact that the gonads and pituitary are so very closely allied, mental disturbances appear. Likewise, one who worries a great deal will soon become weak sexually, showing the close connection and direct influence of one upon the other. We may add that the pituitary has a direct influence upon the pancreas. We find this in a severe mental shock. There will be traces of sugar in the urine.

So we find that a deficiency of one endocrine gland will effect the entire group or chain for which it has an affinity and cause an unbalanced hormone which will produce a series of symptoms showing the various glands affected by the deficiencies.

Interpretation of Findings

My interpretation of this is that endocrines do not function singly, but in groups, so that when one endocrine gland for any reason becomes deficient the entire group for which it has an affinity suffers, because it is the group that forms a hormone and functions only as a hormone.

I also wish to advance the theory that the hormones govern and control the tissue chemistry, keeping it in balance and normal proportions for cell activity, which stimulates metabolism, revitalizes and rejuvenates cell structure.

We are as young as our endocrine glands. When they deteriorate, age comes upon us. Age is a process of devitalization due to endocrine deficiencies.

Each endocrine gland plays its part in forming a balanced hormone. When we have an endocrine deficiency we have an unbalanced hormone. With an unbalanced hormone, there will be an unbalanced and disorganized tissue chemistry, resulting in a degeneration of cell function, followed by accumulation of waste products and toxins, causing further deterioration of cell parenchyma, lowering vitality and resistance and predisposing to the invasion of infection.

Immunity can be established by building up a strong hormone balance. This nature does when there is a normal secretion from every endocrine gland. When there is not a normal secretion, the deficiencies can be built up by saturating the system with such endocrines as have been and are deficient in any group or groups.

Endocrine Therapy

True endocrine therapy is the supplying of endocrine deficiencies by the administration of an endocrine complex (hormone) and not by a combination of drugs and endocrines. They should be kept separate; we should never mask the endocrine function with drug action.

Favorable results will be felt and noticed in ten or twelve days, but it takes from sixty to ninety days to perfect an endocrine saturation. It is after this point of saturation that a balanced hormone is established and commences to stimulate and revitalize the secretory cells sufficiently so that they function normally of their own accord. At this point the endocrines may be discontinued unless there is a steady drain upon the system by some focal infection or total destruction of some gland.

Sex and Character Controlled

At the time of conception, the offspring inherits what the parents have to offer at that time. The parents in their entirety are represented in the hormone-complex-union.

The offspring can hope to inherit only what there is in this hormone-complex. If the female sex-hormone dominates, it will absorb or transform the male sex-hormone in its entirety and the offspring will be a female, though the father may be dominating in other hormones which the child would inherit. The dominating hormones prevail, and the offspring is entirely governed by the hormones at the time of conception.

The glandular system is responsible for heredity. If it is weak by reason of disease or otherwise, we can expect a weak endocrine gland system in the offspring, resulting in a weak frame and a weak body in general, which manifests itself in the

many and various abnormalities, with low resistance to invasion of disease. Diseases are not inherited, but conditions that favor the development of disease are inherited.

In concluding, let me say that by the administration of properly balanced hormones we will not only defeat disease but will be able to mold character and develop a powerful race, mentally and physically, as well as to add many years of happy life to the now normal span.

216 W. Water St.

Extra-Uterine Pregnancy Developing to Term

Death of Fetus. Laparotomy After Three Months (A Case Report)

By MAX THOREK, M.D., Chicago

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CASES of extra-uterine pregnancy which go on to term or beyond are sufficiently rare to warrant the reporting of every instance. This is especially desirable at present when, owing to the greatly improved knowledge of the symptoms and their differentiation, the condition can be detected and accorded the proper surgical treatment in its earlier stages. There is also another reason: undoubtedly many cases of this type occur and are operated upon without a successful issue, and because of this fact are not reported. It is important that all cases should be reported, whether the results be favorable or the reverse. The condition of a patient with an extra-uterine pregnancy evolved beyond term is eminently one for surgical intervention. Such intervention may not save the patient, but as a rule it is the only chance she has. It is only by comparison of the conditions under which an operative method succeeds with those in which it does not succeed that we can judge the value of operation in certain conditions.

The diagnosis of extra-uterine pregnancy in the later stages is by no means easy. While a pregnancy may be evident, the mass felt in the abdomen, which constitutes the extra-uterine pregnancy, may easily be mistaken for a pregnant uterus. If the fetus is dead the diagnosis is much more difficult. This point will be referred to again.

In considering the question of advanced extra-uterine pregnancy, the most important matter for the surgeon is to know what is the condition of the fetus. Several cases are on record of an extra-uterine, fully developed fetus having been successfully delivered by operation, and developing after birth in every respect equal to an intra-uterine fetus.

Chance of Life for the Child

Bianchi[1], Black[2], Calderini[3], and Cullingsworth[4], among others, have reported such cases. Costo Romolo[5] says that the extra-uterine fetus has an equal chance of becoming fully developed with an intra-uterine. An extra-uterine fetus delivered by him was almost equal in weight to normal. Franz[6] obtained two such children weighing 4150 and 3150 gms. respectively. Seitz[7], Sittner[8], Campioni[9], Calderini[10], and Oldhausen[11] delivered extra-uterine developed fetuses varying in weight from 3250 to 3500 gms.

Sittner's statistics of cases of living children after extra-uterine development show that, in a series of 93 such cases, 45 children died within a few months after birth, from causes connected with their extra-uterine development. However, a fairly large percentage of such children develop after birth as well as intra-uterine children, and there appears to be no reason why such a pregnancy, if it has advanced to the viable period, should not be allowed to go on to term, unless there is some condition present which threatens the life of the mother. While there is general agreement, therefore, on the expediency of immediate operation when an extra-uterine pregnancy is diagnosed in its early stages, it is the consensus of opinion that in the late stages the fetus should be allowed to come to term and an abdominal section then be done.

Dunning[12], Boldt[13], and others, favor operation when the false labor pains occur, because if it is not extracted then the fetus usually succumbs; but Moeibus[14], Bovee[15], Reed[16], Nicholson[17], and in fact the majority of authors, state their preference for operating shortly before full term is reached.

Dangers of Operation

An ectopic pregnancy continuing beyond term, with a dead fetus, usually presents many difficulties of diagnosis and of differentiation from other conditions which it simulates. The fact of the prolongation after the calculated term should, however, be considered as highly suggestive, particularly if there has been a history of false labor pains. This was the only history in the case reported below.

With a dead fetus beyond term the two great dangers which the surgeon has to deal with are hemorrhage on removal of the placenta, and sepsis. The danger of an uncontrollable hemorrhage in such a case has forced several surgeons to defer operating until long after fetal death, but in the avoidance of hemorrhage the danger of sepsis, arising from the presence of the macerated fetus, has to be reckoned with.

Wittner's (*loc. cit.*) statistical study of 125 collected cases shows, however, that it is better to operate at once than to await fetal death when a fetus is at or about term, and that the statistics of the comparative mortality of the cases operated upon before and after fetal death do not prove that it is better to await the latter event.

Cases operated upon by Reed (*loc. cit.*) have shown that a placenta may be fairly vascular at three months after the death of the fetus, and that there is some vascularity even after six months. Reed says: "The site of placental implantation is very likely to be, as it generally is, one to which ligation cannot be safely applied; and in the event of the enucleation of the placenta recourse must be had to hemostasis by pressure. The enucleation of the vascular placenta involves the opening of numerous venous orifices, each one of which may become an infective atrium." Reed suggests waiting for two or three months before attempting the removal of an extraperitoneal gestation.

In abdominal intervention for the removal of advanced extra-uterine pregnancy, besides taking care not to provoke an uncontrollable hemorrhage, the surgeon must, if possible, avoid denuding any surface which may become an avenue of infection. Furthermore, in separating the gestation sac from its adhesions to the surrounding tissues, violent traction must be avoided, as it may cause serious damage to the intestines and other pelvic organs. The special precautions necessary to avoid placental hemorrhage may include ligature of the uterine and ovarian vessels, suture of the placental bed, compression of the aorta and tamponade.

It should be remembered that there is no precise interval after the death of the fetus at which placental atrophy and freedom from danger of hemorrhage may be counted upon. If too long a period is permitted to elapse a septic condition occurs similar to that met with in infected tumors, malignancies and so forth. Some operators, taking into account the danger of hemorrhage, have closed the abdomen after removal of the gestation sac, leaving the placenta *in situ*.

Costa Romolo (*loc. cit.*) contends that the abandoning of the fetal appendages with incomplete closure of the abdomen finds its indications in septic cases, or in cases suspected of sepsis, when the sac and the placenta are tenaciously adherent, or are implanted upon organs from which their detachment would be dangerous (liver, biliary passages, etc.). Also, when the placenta is very profuse and difficult to completely extirpate, or when it is assumed that the removal of the fetal appendages would be laborious and long, and perhaps more than the patient could withstand. The operation is then reduced to opening the abdomen and sac, extraction of the fetus, tamponing and marsupialization of the sac and the partial closure of the abdomen; the removal of the sac without the placenta, or the removal of the placenta alone may have to be considered, according to the conditions which present. An incomplete operation, however, is always unsatisfactory both for the surgeon and the patient.

Sittner's statistics show that in cases where the placenta was removed at operation the maternal mortality was only 10.8 percent, as against 34.5 percent when the placenta was left behind. Nicholson (*loc. cit.*) also favors the complete operation, and believes it should be attempted in every case. It may occasionally be impossible to remove the entire sac, but unless there is some very distinct contraindication as much as possible should be removed.

Case Report

Mrs. M. Y. (Case No. 1256), aged 26 years, an American housewife, was admitted to the American Hospital on June 25, 1920. The admission diagnosis was pregnancy, probably extra-uterine.

There was nothing of importance in the family history, and the personal history was negative except for the usual diseases of childhood. Her habits were good. She

had been married for three years and there had been no previous pregnancy.

Her menstruation had always been regular, of the 28-day type, lasting for three or four days and accompanied by moderate pain. It first appeared at the age of 14.

Clinical History: Eleven months ago the menstrual period did not appear at the usual time, but a flow of brownish fluid occurred two days later and persisted for two days. A similar discharge had taken place at regular intervals during the succeeding months, and during the past three months the odor had been more offensive. Nausea developed at the end of the second month, and the diagnosis of pregnancy, which the patient suspected, was confirmed by her family physician at the end of the third month.

The patient stated that she experienced no unexpected discomfort, and did not realize that the condition was abnormal until the end of the expected period, when pains of an intermittent character came on and she failed to deliver in the usual manner. After this there was increased weight in the abdomen, and a sensation of "dead weight". At about this time motion became imperceptible and a sensation of fatigue and lassitude ensued.

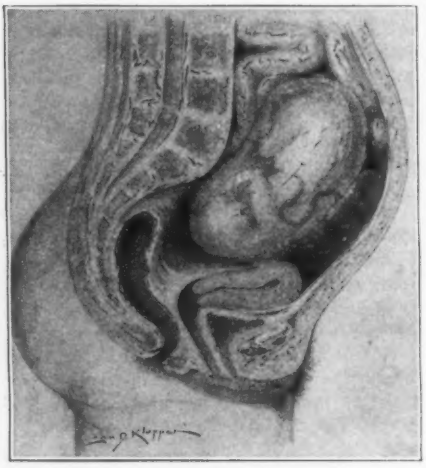

Fig 1. Showing position of gestation sac, fetus and uterus

Operation: The patient was operated on June 28, 1920, under gas-ether anesthesia. The operation consisted of a median celiotomy. The gestation sac and fetus were found lying in the left half of the abdomen, displacing the uterus forward and downward, and to the right. (Fig. 1.) There was placental attachment to the anterior wall of the abdomen (peritoneum) and the fundus of the uterus, and beginning separation of the placenta.

The dead, full term fetus was delivered. The placenta and membranes were detached, the rather severe hemorrhage being controlled with some difficulty with hot irrigations and pack compression. The patient was returned to bed in moderate shock from loss of blood, but proctolysis and intravenous transfusion brought prompt reaction. The convalescence was uneventful.

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The Treatment of Typhoid Fever

By V. E. LAWRENCE, M.D., Ottawa, Kansas

I am firmly convinced that the serious dangers from typhoid fever can be much decreased or eliminated by proper and rational treatment, and though my ideas are contrary to those held by many, I have demonstrated their soundness upon a large number of patients.

My many years' experience in writing have taught me that a narrative of the steps by which conclusions are arrived at is the most decisive means of convincing others of the accuracy of such conclusions.

For this reason, I will recite the steps which gradually led me away from the belief that typhoid fever is an invincible disease and thence to the conclusion that among the diseases attacking mankind it, in reality, is one which most surely responds to proper treatment and that there should follow from an attack of typhoid fever very few, if any, pathologic conditions.

More than thirty years ago I was impressed by the sense of inefficiency and defeat in treating typhoid patients and determined to look for a better way. About this time, the typhoid bacillus had been discovered and a few doctors began to believe that, as a result of this discovery, something might be done to retard the progress of the disease and ameliorate the dangerous conditions resulting from its unopposed march.

I spent the following year in gathering together what little was said by the two or three men who wrote upon the subject.

With this information to guide me, I arrived at the conclusion that, since without exception the intestines were the primary seat of the enemy, *active elimination* (purging) and intestinal antiseptics ought to prevent invasion. Accordingly, I marked out a line of treatment, with those conditions in view.

At that time knowledge regarding intestinal antiseptics was very meager, indeed. I believe nothing had been written about the sulpho-carbolate of zinc, and at first I knew nothing of this salt, but used the arsenite of copper and one or two other antiseptics—now known to be less efficient than the zinc salt. Further, so far as I am aware, no one had written upon or put emphasis upon alvine elimination. However, thought upon the matter convinced me that intestinal antiseptics without simultaneous active elimination could but partly succeed. Also, that the contents of the bowels, together with the typhoid germs, must be flushed out—and actively and completely flushed out—and that this flushing must be continued *throughout* the disease.

I can call to mind no more fatal error on the part of the profession than its failure to realize that diarrhea in typhoid actually is caused by the presence of the infected contents of the bowels and that this flux is nature's effort to rid herself of the cause of intestinal ulceration and of the destruction of Peyer's glands; that nature was crying aloud for an early and efficient cathartic. It is nature's index which for a thousand years the doctors have failed to read and interpret.

Successful Test of the Theory

It was not until a year after my first case that a second typhoid patient fell into my hands.

I had seldom seen a case more fully developed at the first visit. All the symptoms were prominent; the evening temperature was 105°F. Forgetting—ignoring—everything I had learned as to the manner of treatment, I furnished the family with a pint of a saturated solution of magnesium sulphate, and ordered a series of doses (stirred into a glass of hot lemonade—which almost entirely disguises the disagreeable taste), to be given every three hours, until not less than six active movements of the bowels were obtained during the next twenty-four hours. Through a misunderstanding the man's sister doubled the dose, and reported, to my surprise, that the patient had had not less than a dozen passages during this time. I felt slightly uneasy about this. Still, upon examination of the last stool voided and noticing its foul odor, I concluded that such offensive material could not be gotten rid of too soon.

No doubt this statement will be startling to those who have avoided cathartics and feared the least evidence of activity of the bowels. To understand why this patient was not hastened to the grave by such bold violation of established precedent, it must be realized that all hemorrhage comes from ulceration of the intestines and Peyer's glands; that this ulceration is caused by the

septic contents of the bowels; and that hemorrhage is not possible if the putrid, infected contents are removed before having had time to produce ulcers. Of course, all but the mildest laxatives are to be avoided should the patient fall into the hands of the physician after sufficient time has elapsed to permit establishment of the ulcerative process. However, this is not the case when the doctor is called at the usual time.

Directions were also given that the patient should drink one pint of boiled water hourly. Also, that the intestinal antiseptics must accompany the water. No attention whatever was given to any of the symptoms, and no effort was made to enable the patient to withstand the oncoming attack of the disease. This simple treatment was continued unchanged throughout the illness, except that the bowels were caused to move about four to five times daily thereafter.

The patient progressed about as follows: No change occurred for the first three days. Then all the symptoms began to diminish in severity; also, the patient remarked that he felt better and asked for the milk and buttermilk, which before had to be urged upon him. The story can briefly be concluded by saying that from this time on the disease fell completely into the hands of the attending physician—as, indeed, is true for all cases since then. Its retreat was gradual, and its total disappearance occured on the fourteenth day There was no sign of delirium or of hemorrhage and the patient developed no symptoms at all alarming. His convalescence was so short that he was out of bed almost the first day after the fever left him.

Adoption of the Sulphocarbolate of Zinc

This was thirty years ago. Soon after that I began to use the sulphocarbolate of zinc as an intestinal antiseptic, and I believe it is the best. I prescribe it in 5-grain doses, hourly, together with the water. I am careful to be sure that it is chemically pure—an impure article will upset the stomach. Usually the patient swallows the tablet whole; some prefer it dissolved. Boiled water will lose its flat taste after standing twelve hours. The water should be boiled not less than fifteen minutes.

I insist that the patient drink as nearly one pint of water hourly as he can. Some have little trouble in doing so; others cannot drink so much. At first, all complain of a feeling of fulness. This, however, passes away in two or three days, as the kidneys and bowels respond to the demands made upon them by the water. The epsom salts is continued. If either the water or the saline laxative is neglected, improvement ceases.

Experience soon taught me that my typhoid patients needed no heart or other tonics and that the organs performed their offices without assistance. Occasionally I have added a 1/4-grain calomel tablet. It will be found that, instead of having diarrhea, increasingly large doses of the saline are required to obtain the desired number of movements.

The zinc sulphocarbolate should be continued for about a week after recovery, as a preventive against a return of the bacteria, but in less frequent doses.*

As to diet, there is no necessity for the care usually taken. Fresh milk or buttermilk are valuable. The white of eggs may be stirred into lemonade. Beef, finely chopped, may be given raw, and seasoned to taste; or, if the patient prefers, it may be molded into flat cakes and quickly and lightly cooked upon a hot griddle, greased just enough to prevent sticking. I am in the habit of recommending lemonade, as desired, instead of plain water; also plenty of orangeade. Feed the patient often, but in small quantities.

The percentage of fatalities under this treatment has been ¾ of 1 percent. No uncomplicated case has failed to make a good recovery and none has developed dangerous symptoms. There has been an almost complete absence of delirium, and only two had hemorrhage, and they only just enough to be detected.

It must be remembered that the treatment of all diseases is a contest for supremacy between the disease and the body forces and that there are times when the fever will assert itself and even may increase. At this juncture, the physician must not lose faith in his remedies, but continue them in even increased dosage. The remedies will, in due time, assist the body to gain the ascendency.

These thirty years of experience have convinced me that the general adoption of this plan of treatment would reduce the fifty thousand fatalities to about one-tenth of this number.

*Our experience is that, in the average case, best results are obtained with the combined zinc, sodium, and calcium sulphocarbolates; when decided astringent action is desired, then the zinc salt, alone, is indicated.—Ed.

The Acidity and Alkalinity of Urine

Clinically Considered

By CLIFFORD MITCHELL, M.D., Chicago

IN studying the acidity of urine, we seek to learn two things: first, the intensity of the reaction and, second, the extent of acid elimination in 24 hours.

The intensity, by itself, is of clinical importance: (a) in its relation to bacterial development; (b) in its possible relation to kidney and bladder irritation; and (c) in its influence upon stone formation.

Suppose, for example, we determine that a specimen of urine is highly acid: We watch this urine, as it stands, for a deposit resembling red pepper grains; i.e., uric acid crystals. If we find such a deposit occurring soon after the urine is voided, we may suspect, in view of the high acidity, that these crystals are deposited in the body. On the other hand, if it is several hours before we see them, the urine is likely, though acid, not to be intensely so, and the sediment has most likely formed outside the body.

In the case of highly acid urine, soon depositing reddish crystals, a microscopic examination should be undertaken. If the crystals are seen to be sharp and spiny they are deposited, experience shows, within the body. If we find, with the microscope, red blood shadows along with them, we should suspect renal calculus and take steps to verify this suspicion. On the other hand, the red crystals with blunter edges or whetstone-shape, found in moderately acid urine after standing several hours, are apparently of little or no clinical importance.

But there are cases in which a determination of the intensity of the urinary acidity is not sufficient. Such cases are, preeminently, those of patients about to undergo surgical operations. In such cases the total acid output in 24 hours, conveniently expressed in terms of hydrochloric acid equivalent (1.6 to 2 Gm.) is important.

Dr. A. H. Waterman, of Chicago, has shown that patients, persistently voiding urine containing much acid in 24 hours, fare not so well during and after operations as do those whose urine contains only a moderate amount, other things, of course, being equal.

Again we may seek to learn whether a certain diet or certain articles of diet as, for instance, orange juice, will lower the total acidity in 24 hours, and in what quantity per individual. In such cases the determination of the intensity of the acidity is not always sufficient, since the patient may be passing so much urine as to lower the *percentage* of acid measurably, while the *total quantity* of acid may, in terms of hydrochloric acid equivalent, be higher than what we deem normal.

It is evident, then, that a laboratory report specifying merely "acidity, 20 degrees" conveys no information as to the total acidity in 24 hours; but in such a case the latter may be inferred to be normal or subnormal, if the patient is passing three pints or less in the 24 hours, provided the laboratory specimen is a fair average sample of what the patient usually passes.

Collection of Specimens

To do away with "ifs" and "ands", the physician, desirous of learning something trustworthy about urinary acidity, should instruct the patient to collect his 24 hours' urine with the following precautions: (a) eat and exercise as usual, but carefully refrain from drinking more than a quart of all liquids combined; (b) separate the day urine from that passed during the night and keep the day urine, after it is voided, on ice or in a cold place; (c) abstain from all drugs, including laxatives, etc., for 48 hours before beginning the collection, especially avoiding alkalies and alkaline waters; (d) urinate directly into jars or bottles which can be closed or stoppered, and avoid use of chamber vessels or bed pans; (e) see that the collection reaches the analyst as soon as the 24 hours is over, in tightly closed receptacles.

Refrigeration is the best preservative. Women may aid in the preservation of their urine by observing cleanliness, so that vaginal discharges are not allowed to contaminate the urine.

The best deductions from analysis are made, when not only the night urine but also the day urine is clear and free from odor. In the case of women, cloudy day urine of unpleasant odor is all too common, and such urine should be rejected, or else a catheterized specimen be additionally obtained.

In all cases a freshly voided specimen, if possible, should be furnished in addition to the 24-hours' amount.

Those whose bowels do not move without artificial aid may take cascara, mineral oil, or enemas but not phenolphthalein, as we now know that the last named may be eliminated by the kidneys.

It goes without saying that the physician must endeavor to satisfy himself that the instructions given the patient are carried out. Unfortunately, many patients do not seem to realize that in helping the doctor they are helping themselves.

Technic of the Tests

The acidity or alkalinity of urine, clinically considered, is determined by the use of chemical indicators and, in practice, we find three of these indicators in common use: namely, litmus, methyl red, and phenolphthalein, the first two most commonly employed in the form of papers, the third in alcoholic solution, used in conjunction with the decinormal sodium hydroxide solution.

The writer, using the determination of the hydrogen ion concentration as a basis, has undertaken the investigation of the comparative value of the three indicators mentioned above in a large number of urine specimens, both single and for 24 hours, in order that the practitioner may know how much reliance may be placed upon our traditional methods, when it comes to forming a quantitative opinion as to acidity or alkalinity.

Every one knows that there are two kinds of litmus paper, the blue and the red; the blue being turned red by acid urine and the red turned blue by alkaline urine. There are those who endeavor to form an opinion as to the degree of acidity by the intensity of the red color imparted by acid urine to blue litmus. This can be done to some extent, if the practitioner is willing to go to a certain amount of trouble. Litmus paper fades on exposure to air and the blue gradually changes to red. To obviate this, the doctor must either cut the sheet litmus into slips and bottle them, or else buy the slips already bottled. Litmus slips contained in a bottle are extracted with more or less difficulty and possible waste. Moreover, the writer, having purchased litmus from three or four different sources, finds that the blue papers differ quantitatively from one another. That is to say, the blue paper obtained from dealer A may turn but slightly red in a given specimen of urine, while the paper bought from dealer B may turn a fairly bright red in the same specimen. Hence, for continuous observation, we must obtain and use the same grade of paper.

Red litmus paper is, on the whole, not altogether satisfactory. Unless the urine be frankly alkaline, the colors obtained are not always convincing. It is, moreover, more or less troublesome and expensive to use two different papers on the various specimens.

Hence we find the methyl red paper more convenient. Methyl red is supplied, moreover, gratis to the profession. It does not seem to deteriorate easily and need not necessarily be kept in a bottle.

Methyl Red

Methyl red paper does away with the use of two different papers, since it turns dark-red in acid urine and a bright yellow in alkaline. It will turn perceptibly yellow in certain urines, alkaline or subacid, in which red litmus is unconvincing.

But "when doctors differ, who shall decide?" It is a fact, proved by the writer over and over again, that blue litmus paper may be turned perceptibly red and methyl red paper perceptibly yellow in one and the same specimen of urine.

Methyl red is said to be turned red by any urine of hydrogen ion concentration less than 7. Practically, however, the writer, in scores of cases, finds that the methyl red paper turns perceptibly yellow in urines of lower hydrogen ion concentration than 7 as, for example, 6.8, 6.6, or even lower.

However, clinically speaking, if this paper is turned dark-red, the urine is acid, and, if bright yellow, alkaline. If one has a good eye for color, it may be possible to follow the day to day changes in acidity and alkalinity by its use sufficiently well for many purposes.

But, in certain cases, we like to express the degree of acidity in figures rather than in shades of color. Figures are handy for use in records. For example: May 10, acidity 60; May 11, acidity 70; May 12, acidity 100 conveys quickly to the eye the idea that the urine is growing more acid, relatively. Or, if we stickle for total acidity in, say, 1000 cc. of urine per 24 hours: May 10, acidity 60,000 units; May 11, 70,000 units; May 12, 100,000 units.

Phenolphthalein Titration

Unfortunately, however, mathematics and clinical urine conditions are not Siamese twins. For determining in figures the degree of acidity of urine we use, clinically,

phenolphthalein as an indicator. Phenolphthalein is fairly accurate in the case of certain urines, but in other urines something seems to "block" it. We measure off 10 cc. of urine, add to it one drop of a 0.5 percent solution of phenolphthalein in alcohol, and then further add, slowly and with stirring, a decinormal solution of sodium hydroxide, readily obtained from any dealer in scientific supplies. When the mixture shows a distinct, *persistent* pink, we stop adding the chemical and read off the amount used. If we have used 5 cc. of chemical, then we say the urine has an acidity of 50 degrees and, if the urine amount in 24 hours is 1000 cc., then we trustfully record 50,000 acid units in 24 hours.

But in this "lumber" there may be two "coarse boards", to use a familiar expression. In the first place, determination of the hydrogen ion concentration may show the urine to be only feebly acid (6.6 or 6.8), when the titration may show a marked acidity (50 degrees or even higher); and, second, so far as the total acid units in 24 hours are concerned, it may take a Mussolini to control the collection and proper preservation of the entire 24 hours' urine, especially in hospitals. Supposing, however, that the entire 24 hours' urine is really saved and kept on ice during the period of collection, then the titration process may be, at least approximately, correct in figures obtained. The Folin process with oxalate gives lower results than without it, but does not obviate the occasional "blocking" of the end reaction.

When no particular care is taken in the matter of collecting and preserving the urine, titration with the phenolphthalein indicator may become a farce.

Moreover, it goes without saying that the titration method is clinically laughable when the patient is taking (a) alkalies or alkaline waters; or (b), any drugs which may interfere with the formation of the pink color.

The urine, then, must be drug-free and unchanged, in order to obtain correctly the degree of acidity and, if the total acid units are desired, from day to day, the patient and attendants must be controlled in such a way that the entire volume of urine for 24 hours is really obtained from day to day. This result may be more readily brought about when the patient is furnished with printed directions and containers for him to fill, such as fruit jars. In warm weather a refrigerator is also needed. The writer finds that "something" may happen, detrimental to titration, when urine is collected in a chamber vessel standing in a warm room for 24 hours. Whether this "something" is due to ammonium carbonate formation or not cannot here be discussed.

It is also a fact that even a high intensity of urinary acidity may be overlooked by the clinician who uses the titration method only. Such a condition is extremely rare, but the fact that it certainly has happened in the writer's experience contributes to an uneasy feeling in our mind as to the trustworthiness of titration.

However, the proof of the pudding is the eating thereof: the statements made above can be quickly and conveniently verified by consideration of two of the writer's cases as follows:

No. 28042.—Patient an adult (woman). Three specimens were respectively acid, acid, and alkaline to litmus; the first specimen, measuring 500 cc., passed in the day; the second, 425 cc., passed at night; the third, measuring 95 cc., also at night. The hydrogen ion concentration of the mixed urine was about 6.8, but the titration was 30 degrees.

No. 28041.—Patient an adult (woman). Two specimens—day and night—both acid to litmus; the night urine turning the blue paper a bright red. Mixed, the hydrogen ion concentration was 5.4, but the titration (without oxalate) was 25 degrees.

In these cases, then, a strongly acid urine gave a lower titration acidity than a feebly acid one.

Why the strongly acid urine titrated as low as 25 degrees, the writer is unable to explain. In the case of the feebly acid urine the titration of 30 degrees well illustrates that bacterial development produces something which interferes with the phenolphthalein red. But this does not explain a comparatively low titration acidity in strongly acid urine free from bacterial development. Moreover, the Folin method with oxalate does not help matters in highly acid urines, as the titrations run lower with oxalate than without it; hence, any one using oxalate in case 28041 would have obtained a slightly lower reading than 25 degrees.

25 East Washington Street.

Notes on Ultraviolet Therapy*

By J. C. ELSOM, M.D., Madison, Wis.
Director of Physical Therapy, University of Wisconsin Medical School

FOR a great many years I have been interested in photography. I have exposed thousands of sensitized films and plates to the action of light, coming through a photographic lens, the light being admitted for a fraction of a second—sometimes 1/25, 1/50, 1/100, or even 1/1000 of a second. The light is admitted by the momentary opening of a shutter. I have taken these exposed plates and films to my dark room, and under the non-actinic rays of the ruby light, the film appears quite unchanged. There is not the slightest visible effect of the light; but there *has* been a change, somewhere, somehow.

We consider photography a simple process. That is because it is so common, so easy. But there are intricate chemical changes that have been produced by the light on the sensitized emulsion, which coats the celluloid film or the glass plate. These chemical changes are precise and accurate and permanent. The strong light of the sky has deeply impressed itself on the film; the half tones, or weaker lights, have not left such a pronounced effect, and the deep shadows, or weakest lights, have hardly affected the film at all. These variations in intensity are what make the picture. There must be contrast in lighting.

What has happened to this film? Physicists and chemists attempt to explain in high-sounding phrases; but after all, the real reason of the change is quite inexplicable.

If I leave this film in my camera for six months or even longer, I notice that it is still quite unchanged, so far as my eye, or the most delicate microscope can detect; but the chemical effects of the actinic rays are still there, in spite of the fact that they cannot be seen.

Now I mix up a few chemicals in my glass graduate. I take some water, add a substance which is called a developer, which may be pyrogallic acid, or one of a dozen other oxidizing agents; then a little sodium sulphite, sodium carbonate, and perhaps a small quantity of potassium bromide. I pour this mixture on my plate or film. In a few seconds, or minutes, I notice that in places the film is growing dark; in other places not so much so. But an image is appearing, very dark where the light has struck, very light where the shadows were. Some of the emulsion has not been affected at all. My friend's black hat has not affected the film; his red necktie, also, has left no impression. His yellow shoes impress my film very slightly. If he wears an orange band on his hat (which he ought not to) it, likewise, does not show in my negative. Standing beside him is a girl with a blue dress, a purple ribbon, and a bunch of violets. These appear very strongly on my film. What does that mean? The colors at the lower end of the spectrum, the red and orange and yellow, are non-actinic. Their wave lengths are long; too long for actinic effect. But the girl is wearing colors at the upper end of the spectrum—blue and purple and violet; these colors have very short wave lengths. We call them actinic. They impress themselves on my plate. All this variety of effect has been produced by different wave lengths; the shorter they are, the more violently they impress themselves on my plate. I am using the long rays of the red light in my dark room, because we call that a "safe light"; it affects the plate very slightly.

In order to bring out these chemical effects, I must use my developer, an oxidizing agent. Then, after a given length of time, I have what we call a negative. Printed on photographic paper, a positive is obtained—the finished picture, with all the shades of contrast, and my image is clear and complete, as I saw it with my eyes.

Now, after this rambling and colloquial introduction, let us consider another, but similar phenomenon. If we take a cadaver, and expose it to the ultraviolet rays, what happens? We have, perhaps, killed a few million germs on the surface of the dead body; but the dead body itself has not been affected. There will be no erythema produced, no increase of calcium, no effect on the stagnated blood.

Effects on the Living Body

The dead body is like my undeveloped film. It needs a *developer* to bring about the effects of the light. That developer is the circulating blood, the normal metabolism, the physiologic processes going on

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within the living body. The actinic rays are then absorbed, developed, if you please, converted into energy; changes within the body occur, erythema is produced on the skin, the calcium and phosphorus content of the blood is augmented; somehow, a life-giving element has been introduced, and has been developed. Powers of resistance have been increased, biologic changes have come about. How is this done? I do not attempt to explain. I do not know exactly how my photographic developer brings into view the latent image on my film.

Is this a fanciful comparison of the light on a photographic plate and the light on a living human body? It may be; but to me it presents a *picture* of the possible conditions in ultraviolet irradiation, and of its action on the growth and development of all plant and animal life. Dead grass will not turn green from the action of the sunlight. The circulating juices of the plant (the developer) are not there to bring out the action of the light.

Without light, there is no life. Absence of light may bring on disease; the presence of light, in proper proportion and dosage, may cure disease. That is ultraviolet therapy; the most potent remedial agent, except the sun itself, of which we have knowledge. In health or in disease, therefore, light is necessary.

Pigmentation.—Exposure to ultraviolet rays brings about a change in pigmentation, resulting in increased tolerance to subsequent raying. This seems largely a melanin reaction; the skin appears rather more yellow than dark brown, as from sunlight exposure. It is said that thyroid types usually burn, and adrenal types are more apt to tan, without burning. It seems to depend on the endocrine status of the individual. There is apparently marked endocrine stimulation after a course of ultraviolet.

In *Ulcers*, it must be remembered that the new cellular proliferation may be destroyed by over-raying; hence the caution in treating ulcers. The new cells must be old enough to have acquired the toughness that old established epithelium displays. The dosage should not be greatly increased from time to time, and the exposures should be very moderate. In addition, a complete body raying is advisable.

In *Pregnancy* ultraviolet irradiation plays an important rôle. There is obvious need on the part of the woman for abundant calcium, which is exhausted in the supply to the fetus, and in subsequent lactation. The lack of calcium is apt to start the fetus in life handicapped by a calcium deficiency, with resulting rickets, defective teeth, and a variety of disorders. The blood calcium should be from 10 to 11.5 mg. per 100 cc. The lower figures are sometimes found in low *total* blood calcium.

There should be sufficient calcium in the tissue cells, as well as in the blood. Laboratory tests are not the only indication of the clinical picture. Hence in rickets, we should not focus our attention on the calcium only; there is also a phosphorus problem. In certain cases, the calcium need not be greatly raised; but if phosphorus is increased in the proper proportion, the rickets is healed. Thus there is a true scientific basis for the use of ultraviolet rays in fractures, rickets and pregnancy.

In ultraviolet therapy, one must study the technic of exposure, the physiologic effects, the indications and contraindications. There is abundant current literature on the subject with which every practitioner should familiarize himself. It would seem that we are just at the beginning of our knowledge of the values and action of light. It is a potent therapeutic agent, capable of doing harm, as well as good. When the Creator said "let there be light," and the commentator remarked that the "light was good," a truth was expressed, concerning which we need not change our minds, even in these changing times.

Lessons Learned in Treating Pneumonia

By J. M. FRENCH, M.D., Milford, Mass.

Pneumonia in the Aged

PNEUMONIA is a very common disease in the aged, and so fatal that Osler calls it the natural end of the old man. Statisticians tell us that more than one-half of all cases in patients over fifty years of age die, while above that age the mortality increases very rapidly. Yet it is a great mistake to give up a pneumonia patient because of his old age. The very fact that a person has lived to be sixty, seventy, or eighty years of age is proof positive that he possesses a strong constitution and great endurance. Many times these aged persons will endure pain and suffering and finally recover from a serious disease, which would cause the death of most young persons.

The manifestations of this disease in old people differ greatly in many cases, though not in all, from those of the same disease as seen in young people. Often the initiatory chill is lacking. Crepitation, and the accompanying dullness on percussion, are sometimes wholly lacking. The temperature may continue low throughout the whole course of the disease. This is always a serious symptom, since it shows a lack of vitality—an exhaustion of the vital forces—which often cannot be overcome. The local symptoms as a whole may be slight, while the constitutional manifestations may be out of all proportion to those usually found in younger persons.

In the matter of treatment, old age calls for free elimination, efficient measures of support, both medicinal and dietetic, and the best of care and nursing. Especially should these patients be taught the necessity of husbanding all their resources, especially those of the heart. To this end it is absolutely essential that they should lie quiet in bed, preferably flat on the back, during the entire duration of the fever, and until all danger to the heart is past, and the doctor has given permission for them to sit up and move about. The neglect of this precaution has cost me much trouble, as I shall tell you later.

Death from Under-Nourishment

I had as a patient for many years, a man whose vocation was that of a needle-maker, but whose avocation had to do with personal hygiene. His particular hobby was the idea that most people eat too much and breathe too little. He was a good citizen, and more than ordinarily intelligent in many lines. He was a good writer, and the author of many interesting articles on personal hygiene. But his constant cry to those in search of health was, "Eat less and breathe more." At one time he was instrumental in forming a local "No Breakfast Club," which at the outset attracted quite a number of kindred spirits, but had only a brief popularity. Personally he carried out its precepts to such an extent that he usually ate but one meal a day—and, I should judge, but little at that one. His wife walked in the same path with him, and his children were trained to eat little and breathe much, until they finally rebelled and refused to follow his teachings any longer.

The two physical disorders to which he was most subject were colds and constipation. The first he treated by fasting and deep breathing. If not promptly successful in aborting the attacks, he was always optimistically confident that it was only because he did not begin fasting soon enough, or did not keep it up long enough. His frequent attacks of constipation he treated in the same manner, and if this was not successful, it was supplemented by a dose of physic. His materia medica was very simple.

One bitter cold day in winter he came home from Boston suffering from a severe cold, which he treated with his usual remedies, fasting and physic. Growing worse instead of better, he sent for me. I found him well advanced in pneumonia, not with a high temperature, but very weak, and evidently suffering from a condition of chronic undernourishment: In other words, he was half starved, had no vitality, and no reaction. It was impossible to obtain a satisfactory response to food or medical or physical treatment of any kind. He had no more resisting force than a piece of water-soaked brown paper. He did not rally, but died in a few days, the victim not so much of pneumonia as of innutrition, a pitiful example of an under-fed and poorly nourished man, with no vitality and no resistence, dying when he ought to have lived.

It was a lesson which I have never forgotten. It impressed upon me the prime

necessity of proper nourishment, and the danger of the fads and follies of the dietetic crank. It also helped to settle in my mind the conviction that, for the most part of the people of the world, the experience of thousands of years has proved that three meals a day is the best rule as to frequency of eating. And it showed me clearly that when any man has trained himself to undereating to the extent that this man had, once in the grip of any serious illness, no manner or amount of nourishment can build him up or carry him through to recovery.

"Walking" Cases are Usually Fatal

One morning I had a telephone message from a brother physician, asking me to attend one of his patients for a few days while he was absent from town. It chanced that the man he wished me to attend had previously been my patient for several years, until he removed from my town to the one where the other doctor lived. I went at the appointed time, and found the man looking out of his chamber window and watching me, while I was trying to hunt him up, not knowing just where he lived. He was fully dressed, and apparently had not been in bed at all except at night. Examination showed that his temperature was below normal, nearly all of one lung was solid, and the heart was burdened almost to the point of collapse. The man had passed the crisis of his disease, and was at the point of death even under the most favorable conditions. Yet at no time had he been kept in bed, but had been about the house as usual, apparently not realizing the danger of his condition.

I did my best to impress upon him the fact that this was not only dangerous but exceedingly critical even with the best of care, and that it was nothing less than suicide for him to be up and dressed and walking about the house under these circumstances. I charged him in my most strict professional manner to take off his clothes, go to bed, and stay there, not stirring from off his back until I gave him permission to do so. I even emphasized my directions by telling him the gruesome story of the woman who died of heart failure on account of my neglect to caution her in this respect, of whom I shall speak presently, but warned him that he should not have the excuse she had. I charged him that I would not be responsible for his life, if he did not obey me strictly. By these means I did succeed in getting him into bed, but there was no chance to keep him there. His only attendant was his wife, and she had no control over him in any degree.

At midnight my telephone bell rang sharply, and I was called to come in haste to see him. He died shortly after my arrival. His wife told me that in less than two hours before he died, he got up out of his bed and wandered out into the kitchen, where he staid some time before he could be persuaded to go back to his bed.

This case serves as a good illustration of walking cases, not only in pneumonia but in fevers of any kind. Whether done in ignorance or foolhardiness, it is nothing less than suicide for a man in such a condition to keep about the house. The only proper place for him is in bed, and to be kept as quiet as possible. Nothing else will give the heart a fair chance.

It is the Heart that Kills

Somewhere in the early nineties, I had as a pneumonia patient a widow about 75 years of age, whom I ought to be able to quote here as a brilliant example of the ability of the aged to endure hardships and recover from serious diseases quite as well as younger ones. But alas! it was not so to be.

Her case was a fairly typical one, except that it lacked the great prostration which is often seen in persons of her age. She went through the various stages of the disease without any unusually serious symptoms, passed the crisis in safety, and began to improve rapidly. In a few days more the diseased lung was restored nearly to its normal condition, her mind was clear, and her whole condition was favorable, so much so that it seemed that the danger was practically over. So one morning I said to her, "Now, Mrs. B., you are getting along so finely that I do not think it will be necessary for me to see you tomorrow, but I will come the day after." So I went home and took the train for Boston to attend to some matters of business, dismissing Mrs. B. from my mind meanwhile. When I reached home in the afternoon, imagine my surprise and chagrin to learn that she was dead.

Soon after I left her, encouraged probably by the favorable comment I had made on her condition, she got up out of her bed—remember that all this was before the day of the trained nurse, and that there was no one at hand to look after all the minutiae of the case, as there would be today—and

remarking how much better she felt, walked to the window, and looked out into the garden. Declaring that she felt better and was growing stronger every day, she next went into an adjoining room and looked about a little, then went back into her room, and sat down on the bed. But the effort had been too much for her weakened heart, which had not yet regained its usual strength. She was seized with a severe attack of heart failure; and with nobody at hand to do anything for her, and refusing to have another doctor called, in a few minutes she was beyond the reach of help.

You may imagine my feelings in this case when I realized, much more fully than did any of her friends, that the fault was largely my own; for if I had been awake to the danger, and had given her proper caution and the needed directions, she would undoubtedly have accepted my suggestions and acted in accordance with them, with the result that I might have been able to report her recovery. Instead of this, she was dead. And though I suppose that I reported it as a death from pneumonia, yet I realized full well that it was not properly a death from pneumonia at all, but rather an accidental death from a needless accident, for which I myself was to blame. Yet I never had reason to think that any one blamed me for the result—any one, that is, except myself.

I can only say that I have made it a point that this experience should never be repeated. Ever since that time I have been careful to give the necessary caution to all my pneumonia cases, and especially to all aged persons, and I have told it repeatedly to medical societies and in medical journals, in the hope of expiating to some extent for my needless carelessness in this case. And here again, I caution all who read this paper, to keep their pneumonia patients—especially all aged persons—on their backs in bed, until the heart has had an opportunity to recover its tone and vigor.

Fresh Air May Save Life

I remember when I was young in medical practice, having an old Eclectic physician as a consultant in a case of pneumonia. Among the things which he impressed upon my mind as of especial importance was the selection of a room for the patient. Give the pneumonia patient the best room in the house, was his teaching. Especially it should be a large room, well lighted, and with plenty of fresh air. Since the pneumonia patient has only a limited area of lung tissue with which to breathe, he must make the most of what he has. Plenty of fresh air is essential to his recovery.

This lesson was brought home to my mind very forcibly many years later when I had as my patient an old lady of 60 to 65, living alone with her son, in a small house, and cared for in her illness by her married daughter who lived close by. There were not many rooms in the house, and none of them were large. She was sick in a small room, with one door and two windows, both of which were double—made so to keep out the cold. But she needed fresh air more than she needed warm air.

She was seriously ill from the first, but not hopelessly so. As the case progressed, and the crisis drew near, its seriousness grew more pronounced, and we had much anxiety as to the result. I saw her in the morning, and left word what to do, telling them in case of alarm to call me. Towards night the call came by telephone, telling me she was worse, and asking me to come down at once to see her. And though there was nothing said to that effect, yet I knew from the sound of the voice that they wanted me to come prepared to stay all night if necessary. I went down and took in the whole situation. Her fever was high, her breathing rapid, and her heart oppressed. She was struggling for breath. Then I remembered the lesson of my old consultant. I saw that she was in a small room with the bed in one corner; both windows sealed up tight to keep the air out; and the one door opening into the living room. And she was dying for the lack of fresh air. It was winter, but the rain was falling and the wind was blowing, with the snow sloshy on the ground. By all home standards, she must be sedulously protected from these. But the laboring heart, and the struggle for breath, told another story. What was done must be done quickly, or she would soon be beyond the reach of help.

I called her son to me, and explained to him her situation and its danger. Then I told him what I wanted him to do. First, hang up a blanket below the foot of her bed, so that she would be protected from the wind and the rain. Then take out the double windows and let the fresh air come in. And I added, I will stay with you and watch the result, *and I will take all the responsibility.*

Fortunately he was a young man of good sense and judgment. He saw that something must be done, or his mother would die. So

he accepted the situation cordially, and carried out my plan to the letter.

Within a very short time—I do not think it was more than fifteen minutes—she began to breathe easier and the laboring heart beat more naturally.

She recovered, and is alive today. Of course, you may say that it was the crisis—which was true—and that she would have recovered anyway—which I do not believe. At any rate, I tell the story and offer this cure by fresh air to offset the death which occurred from heart failure due to my neglect. If the credit in the one case could offset the blame of the other, I should be more than content.

Recovery Sometimes Occurs Unexpectedly

Eighteen years ago, I had as a patient a pupil nurse in the Milford Hospital, who had been taken seriously ill with pneumonia. So sudden was the onset of the disease, so rapid its progress, and so prostrating its effects, that it seemed almost malignant in its character. She was seen by several of the members of the staff, who all agreed as to the nature of the disease and the seriousness of the prognosis. No medical or other treatment seemed to have any favorable effect upon her. She grew worse rapidly, and was delirious most of the time.

Much less was known of the serum treatment of pneumonia at that time than is known today, and no member of our staff had ever had more than a slight experience with it. But after having given what seemed at least a fair trial of the usual methods of treatment, and seeing no prospect of success from any of them, and no hopeful suggestions being offered by the the other members of the staff, I bethought me of this comparatively new treatment, which was then being advocated by well-known men, and introduced to some extent into both hospital and private practice. One of its special advocates was Prof. Leary of Tufts College Medical School, who not only prepared the serum in his own laboratory, but furnished it to the doctors in the vicinity for experimental use.

Feeling that recovery was very doubtful in this case, as things were going then, and having great hopes but little knowledge of the new remedy, I made haste to send to Prof. Leary for a supply of the pneumonia serum which he was preparing, sufficient for use in this case, urging all possible haste.

But the serum had to be made up especially for our case, and was delayed in getting to us. When it did finally arrive, the patient was so low, and still failing, that I did not feel like trying the new remedy, in the face of what seemed the hopelessness of the case. It seemed to me that to use it under these circumstances would be certain to result in failure, and would thus condemn the remedy without having given it a fair trial. So I did not use it, but waited hourly for her death.

And then, when all hope had been practically abandoned and the arrangements for her funeral were being considered, a crisis suddenly came on, and she began to gain almost as rapidly as she had failed. It was, indeed, an unexpected recovery, and no remedy or treatment of any kind can be given any special credit for the result. We had, of course, given her the best treatment in our power, both medical and nursing, but the fact remained that, after having done our best, her condition continued so unfavorable that we had practically given her up. And then, without any known cause to which it could be attributed, except, indeed, that most wonderful of all causes, the *vis medicatrix naturae*, she suddenly rallied, and speedily got well—and is still living and in good health.

If, at the critical moment, I had given her the anti-pneumococcus serum, and things had worked out as they actually did work out, no power on earth could have prevented the general impression going out, that the pneumonia serum had saved her life—*after the doctor had given her up.*

I like to feel that I have learned something from each case—at least each serious case—but from this one I can gain no more important lesson, or one more to the point, than the old, oft repeated and still much needed one, that the doctor must not allow himself to give up hope while life lasts. If that is too strong a statement, I will modify it by adding that if he does give up hope, he had best not admit it while the patient still lives. And after all, it is one of the blessings, not often met in a doctor's life, that results like this do sometimes occur, when unexpected recoveries crowd out funerals.

Radical Cure of Hemorrhoids by the Injection Method

By C. M. RICKERT, M.D., Harrisburg, Pa.

THE radical cure of hemorrhoids by the injection method was for a long time in the hands of charlatans and quacks. It is superfluous to reiterate how the method came into use. The different solutions used have often been described and more often condemned than lauded. I was convinced in the beginning—and that is more than thirty years ago—that the method had merit if correctly done.

When I read that Dr. Andrews had investigated and collected data on a series of more than 3,300 cases, and that these had been treated mostly by irresponsible persons who knew absolutely nothing of asepsis or the anatomy of the rectum, the cures seemed marvelous. At different times for a number of years, prominent surgeons throughout the country became interested, some reporting splendid results and others condemning the method as unsafe.

Some years ago Dr. J. W. Hallum, in a communication to the *International Journal of Surgery*, said that it is a method he hesitated to present and advocate, not because of any of its defects, but because of its many opponents.

I have found that, with the improved methods, there are no tenable objections to this form of treatment that could not be urged against most of the surgical methods. The late Dr. Tuttle, of New York, recommended its use in certain cases. Dr. Hill, of the Harvard Graduate School of Medicine, in his "Manual of Proctology", recommends it very highly and his results have been very satisfactory with the use of a solution of quinine and urea hydrochloride.

Drs. Martin and Albright, of Philadelphia, have used and recommended the injection of piles and the former had much to do in popularizing this method.

Nearly twelve years ago, Dr. Tirrell, of Richmond, Va., reported a series of 128 cases treated by the injection of a solution of quinine and urea hydrochloride in varying strengths up to 10 percent. This treatment at once appealed to me as a great step in advance in the injection method. Different medical societies have, however, denounced anyone who dared to use this method openly, and branded him as unethical.

Since the injection method is now on a more scientific basis than ever before and less practiced by the unscrupulous and irresponsible, there is no reason why any physician who is capable and trained in its use should not employ it. We find many people who dread any form of operation and shrink from it with a deadly fear and will do anything to prevent it. I feel it is our duty to take care of these people as we now have a rational scientific method.

There is no organ so prone to disease as the rectum. There is no class of cases so little understood, as a general rule, as rectal diseases. There are no diseases more annoying and painful and, at the same time, so productive of such dire results to the general system, directly and reflexly, as rectal diseases. Knowing all this, it is surprising that there is, comparatively, so little attention paid to or stress laid upon the examination and treatment of these cases in our medical schools. At our last meeting of the State Medical Society there was not a single paper read or one discussion of a rectal condition.

I use the ligature in all my cases not suitable for the injection method. A number of surgeons, and especially Dr. S. G. Gant, of New York, have so simplified the treatment of most of the diseases of the rectum, under local anesthesia, that most of this work can be done in the office and at home; and I confess that, had the treatment under local anesthesia been better known years ago, I should have had much less use for the injection method. Notwithstanding all this, there are a number of selected cases that I prefer now to treat by injection.

Solution and Methods

It took me a long time and it was only after some trying experiences that I found the right solution. Carbolic acid in various strengths was the principal drug used. When quinine and urea hydrochloride was suggested, I at once tried it and with such splendid results that I now use it exclusively. I use a freshly prepared solution of from 8 to 10 percent, with a good, ordinary hypodermic syringe and a good-quality needle with a sharp point. A needle of about 20 to 22 gauge and from 1 inch to 2 inches in length is best.

For anyone who intends to do much of this work I should recommend a larger syringe, with gold or platinum needles. Dr. Gant's goose-necked syringe with a shouldered needle, so as not to penetrate too deeply into the pile mass or rectal wall, is perhaps one of the best.

Have the patient lie in the right or left lateral positions, preferably the left in most cases; thoroughly cleanse the parts (I use chlorazene exclusively); have patient bear down sufficiently to bring the piles into view (with a speculum they can be brought down very readily); cleanse the pile or piles and inject 10 to 40 minims of the solution into the center of the mass or a little nearer the top so as to avoid the rectal wall. The pile will at once become moderately distended and turn pale. Keep the needle in position so as to prevent the fluid from escaping. It may take you some time to gauge the proper amount. If properly done, it will cause very little annoyance or pain. Inject only one or, at the most, two piles at one time. In rare cases of the internal varieties, where the masses bleed freely, I inject all the piles at once. This is rarely done, and only in cases where the patient is almost exsanguinated would I run the risk of pain and inconvenience, in preference to allowing him to bleed to death.

Always instruct the patient that if, for any reason, the pile prolapses, it should at once be replaced, otherwise there will be considerable pain and swelling. Inject only the internal variety that prolapses with each movement of the bowels or can easily be brought into view. If done properly, they will have shrunken to such an extent, after four to six weeks, that they can hardly be detected by a digital examination. In my cases there is rarely any bleeding or prolapse after the treatment.

Case Reports

A few case histories may be instructive and give some idea of the success of this treatment in different cases.

Case 1.—A Civil War veteran, 72 years of age. Had prolapsing and bleeding piles for years. The mass was as large as a large hen's egg. He told me it had been the size of a goose egg, and always had to be cleansed and returned after stool. I injected the mass at one time. No prolapse or return of any pile after 8 years.

Case 2.—Male, aged 36 years. Paper hanger by trade. Had lost so much blood that he suffered from dyspnea. He was so pale and anemic that I was afraid at first to take the case.

I had the patient bear down and I found three masses, each the size of a walnut, bleeding profusely; so much so that my chair, table and floor were spattered with blood. I injected the three masses, returned them, and that ended the bleeding and prolapse. In four weeks he was able to go to work. No return of anything after 4 years, with a gain of more than 30 pounds in weight.

Case 3.—Male, 76 years old. Was referred to me by one of our best surgeons, as his age and heart condition precluded any operation. I injected four large masses at different times, with very little reaction or general disturbance. He is completely cured of the piles and has had no return after 3 years.

Case 4.—Female, age 35. Pregnant 8 months. Her physician asked me to go with him to see her. He was afraid she might bleed to death and he did not deem it advisable to have her undergo any severe operation. She had several large bleeding masses. I injectel them all at once. The physician was surprised at the slight disturbance caused by the injection and the prompt relief, as bleeding was checked at once.

Case 5.—Male, 55 years old. Weighed over 250 pounds, but had lost so much blood and weight in a little more than a month, that his physician feared there might be something malignant about his condition. The treatment was sufficient. No more bleeding and no return of any piles after 5 years.

These are a few of the hundreds of cases treated but I am sure they will give an adequate idea of the value of the method and the variety of cases that can be treated.

Surgical Seminar

Conducted by GUSTAVUS M. BLECH, M.D.

[Note: The Seminar is devoted entirely to the practical interests of surgeons. Problems and their discussions are solicited. Contributors must give their names, but whenever desired these will not be published. Questions for this department should not exceed fifty words. Address all communications for the Seminar to Dr. G. M. Blech, 108 North State Street, Chicago.]

Surgical Diagnostics (Continued)

Sounding. A method which may be regarded as supplementary to and an extension of palpation, is sounding of the natural and artificial cavities and passages. We sound the esophagus and stomach; we explore in a similar manner the urethra, bladder, ureters and pelvis of the kidney; and finally "bougie" the rectum.

From the standpoint of "extended palpation" we are primarily interested in the question whether the passages are free or strictured, and in the latter event, whether the obstruction is due to foreign bodies, new growths or cicatricial contractures.

We explore, preferably, with hollow rubber sounds of suitable design, because they not only render service as sounds but enable us to withdraw liquids or to test the filling capacity of certain sac-like viscera; e.g., stomach, urinary bladder, pelvis of the kidney. Finally, these instruments are invaluable in the diverse functional tests which we shall review later on.

The esophagus is best sounded with the ordinary stomach tube. If, on account of some obstruction not due to a malignant neoplasm (carcinoma), the stomach tube fails to give us the desired information, resort should be had to a more rigid instrument, which, however, must be pliable enough to adapt itself to the character of the structures of the uppermost digestive tube. The market is flooded with all sorts of metal bougies, some of which are very good and certainly suitable therapeutically for gradual dilatation, but as a general proposition the olive-pointed, semi-rigid, rubber esophageal bougie, which was first used in England, is the best for diagnostic purposes.

The technic of sounding the esophagus is of the utmost importance, and as this method is one which is not often practiced even by busy surgeons, a few general directions may not be amiss.

First, the patient should be put in the best possible psychic condition before undertaking the examination. A few words of assurance that there is no danger whatever and especially that no one can choke, plus the positive instruction to breathe deeply through the nose will usually be all that is necessary.

Unless rendered impossible by a definite contraindication, the patient should be on a chair or in bed in a sitting posture with the head held in a natural, unrestrained position.

The stomach tube or semi-rigid bougie is taken from a dish filled with warm water with the thumb and index finger of the right hand and held throughout the following manipulation like a writing pen. The index and middle finger of the left hand are used to press the patient's tongue down and forward, as this position greatly facilitates the gentle pushing down of the moist instrument alongside the posterior pharynx.

As soon as the tube or bougie has passed the level of the larynx the patient is instructed to tilt back his head a very few degrees, a position which renders the final steps in the sounding more easy anatomically.

In sounding it must be remembered that, while the bougie or tube is being gently pushed down the pharynx into the stomach, the pushing fingers are to play the rôle of a mentor, showing the instrument how properly to glide down almost unaided. All this must never exceed what I may be permitted to call "coaxing" of the instrument. Force is absolutely forbidden, as perforation of the esophagus is apt to occur under certain conditions — a calamity not easily remedied.

Another objection to terminating this method of exploration is vomiting. I have seen a number of physicians continue to hold the stomach tube in place while the patients were vomiting, to avoid, as they later explained, the annoyance of reintroducing the tube. This is poor practice. There is danger of the patient aspirating some vomited matter into the air passages with results too well known to require even mention.

As a general rule, one will be able to forestall vomiting by two precautions:

First, the stomach should be relatively empty, except, of course, when the tube is used to empty the stomach after a test meal; and second, when a patient shows that he has a very sensitive throat, the pharynx should be rendered analgesic by swabbing with a 10-percent solution of any of the safe cocaine derivatives; finally, one should never forget to remove from the mouth any false teeth or plates which are not securely fastened by modern dentistry.

Intelligent sounding presupposes at least a certain familiarity with the normal structure of the esophagus. We know that, measured from the line of the patient's teeth to the cardia, the length of the esophagus amounts to about 40 centimeters or 16 inches. The esophageal tube is not uniform in diameter, but shows normal constrictions at about 15 centimeters (6 inches), 26 centimeters or about 10 inches, and, last, 38 centimeters or about 15 inches from the line of the teeth. These distances either are or can be marked off on the tube or bougie for our convenience. It must be recalled that these natural constrictions or narrowings of the esophageal lumen are the seats of predilection for foreign bodies, strictures and malignant growths (especially carcinoma).

In the examination for foreign bodies it must be recalled that the fact that an esophageal bougie passes into the stomach without hindrance is not absolute proof that there is no foreign body lodged in the esophagus, for certain narrow foreign bodies, including even artificial dentures, may remain in a position to allow the bougie to pass by. The presence of such foreign bodies will be ascertained either by the introduction of another bougie alongside the one that passed through or by any of the known diagnostic means, such as roentgenography, esophagoscopy or fluoroscopy.

Let us assume that the stomach tube encounters a hindrance in its passage to the cardia and that, in view of the history of the case, we suspect a stricture. The first question that presents itself is whether we have to deal with an organic or mere spastic stricture. Here the stomach tube is useless, partly because it is too pliable for the situation, partly because it cannot give us the information we most need with reference to the extent and character of the stricture, if it be an organic one. We must now have recourse to the olive-pointed esophageal bougie. We settle the question of a spasm in a very simple way. We maintain an exceedingly moderate but constant pressure against the obstruction. If the instrument passes through after a minute or so, we know that we have no organic lesion before us.

In case the stricture prove to be a lesion due to scar formation, we select suitable bougies, referring of course to thickness of the instrument, until we can visualize the actual situation and decide on the proper therapy. It goes without saying that this same instrument is absolutely dangerous when we have reason to suspect a carcinoma.

Another condition, though encountered rather infrequently, may lead one to diagnose stricture when in reality there is merely a sort of dilatation or pronounced diverticulum arresting the passage of the bougie. This error in diagnosis can be avoided if one bear the possibility of a diverticulum in mind and maneuver the bougie by slightly withdrawing the instrument and then again attempting to push it down. If this maneuver succeeds, the diagnosis of a diverticulum is established beyond doubt. If it fail one can never be sure that the sound has not reentered the diverticulum, but all doubt can be dispelled by endeavoring to pass another bougie along the first one. If this passes, the diagnosis obviously must be diverticulum; and stricture if the second instrument fails to go through.

(To be continued)

Discussion and Solution of Problem No. 11. (1926)

Recapitulation. This problem was submitted by Dr. B. B. Parker, of Allerton, Iowa, in the December issue (p. 878) and briefly was as follows:

A girl, 8 years old, was seen for a tumor or swelling involving the upper and posterior third of the forearm. Except for the mother having had one miscarriage, there is nothing noteworthy in the family history. The patient was delivered normally and was breast-fed. About a year ago the girl had some eye trouble and as no definite diagnosis was then made the child was given potassium iodide "on general principles".

The present trouble began in February of 1926. A physician diagnosed abscess and ordered poultices to the swollen arm. Although the patient made no complaint of pain and the swelling presented a fusiform hard mass apparently connected with the ulna the attending physician made an incision which yielded no liquid whatever.

Consultation with Dr. Parker followed. Roentgenography showed a general enlarge-

ment of the ulna with periosteal thickening and some separation but without bone destruction anywhere. There was neither pain nor stiffness of the arm and there was nothing in a blood count or urinary analysis worth mentioning.

In the belief that he had to deal with the local manifestation of a constitutional trouble, the author gave potassium iodide which reduced the swelling, but at the site of the incision there developed an extensive ulceration discharging foul, sero-sanguinous fluid.

Both parents had negative blood Wassermann reactions.

The requirement called for a discussion of the diagnosis.

Discussion by General Geo. Acheson, St. Martins, N. B., Canada

In this case three possible diagnoses present themselves. (1) Tuberculosis, (2) Chronic osteoperiostitis — a tertiary manifestation of inherited syphilis, and (3) Osteosarcoma.

1.—The history and x-ray findings are not significant of tuberculosis—no rise of temperature, no caries or necrosis, no abnormal blood count, epiphysis not involved.

2.—We are not told the result of the Wassermann test, and there is not much in the history as related to prove inherited syphilis. The absence of pain also is rather against a diagnosis of osteoperiostitis.

3.—I am inclined therefore to think that we have here a sarcoma of the ulna, a condition distinguished by comparative painlessness and steady growth, and, I may add, intense malignancy, where the only treatment is amputation of the limb.

Editorial Comment Based on Solution by Dr. Parker

Inasmuch as General Acheson has most ably discussed all phases of this problem, there is no need repeating similar solutions. My only comment is that this case presents certain difficulties from a seminaristic viewpoint. Had Dr. Parker stated in the problem that while the parents of the child showed a negative Wassermann blood test the patient herself after a brief administration showed a four plus Wassermann reaction, there would have been a case report but no problem. However, in view of the blood finding and the further fact that antiluetic treatment greatly improved the condition the diagnosis of syphilis, which must always be excluded with absolute certainty before one can assume the responsibility of diagnosing malignancy with its resulting deforming therapeusis, appears fully justified, in spite of the apparent existence of a sarcomatous picture. Under the condition as stated, the problem becomes a highly interesting one and we thank Dr. Parker for his presentation and Dr. Acheson for his very able and scholarly discussion.

Discussion of Dr. Johnston's Case by Dr. F. W. Schroeder, Strasburg, Ill.
(*See December 1926 issue, pages 878 and 879*)

This woman undoubtedly, at some previous time, had an endometritis which was the remote cause of adhesion of the placenta, the immediate cause being an excess of connective tissue in the decidua—a projection of chorionic villi into the myometrium. When traction is caused on these structures they resemble white fibrous adhesions.

Dr. Johnston had an exhausted uterus to contend with. Even had the placenta been free in the uterus, its extraction might have worked like the piston of a syringe and turned the uterus inside out. Making pressure on the abdomen only aided the process of eversion. Grasping the uterus between the thumb and fingers of the left hand, if this was possible, might have been better.

The probable cause of death was shock, produced by the abdominal vacuum set up when the womb and its placenta left the abdomen. To replace the mass immediately is the rational thing to do, although the damage done is seldom reparable.

Dr. Johnston cannot be held responsible for this accident as he was not in attendance from the beginning and was not in a good position to know the physical status of the patient.

These people probably wanted to save money and therefore engaged a midwife. Now they know that a doctor is much cheaper than the undertaker.

Discussion by Dr. Lorenzo Chapman, Grand Falls, N.B. Canada

Dr. Johnston's report is very interesting indeed, for I feel safe in saying that few of us who have had a good deal of obstetric practice have had a similar experience.

To my mind this case shows the fallacy of the Credé method of expulsion, taught us in college and text-books, as well as the soundness of the dictum that traction should not be employed if it is suspected that the placenta is adherent. The better plan is to wait for natural contractions of the uterus, to stimulate which small doses of pituitrin may be administered whenever needed. If after a number of good contractions the

placenta remains in the same segment of the uterus, we may well assume it to be adherent, and then manual separation under general anesthesia is, I am sure, a rational procedure.

We have our lessons by experience. Certainly no criticism of Dr. Johnston is even implied, and I merely recite the fact that, since I have abandoned the classic Credé method and rely on manual removal of the adherent placenta, my results have been much better.

Discussion by General Geo. Acheson, St. Martins, N. B., Canada

This woman had doubtless suffered a good deal at the hands of the midwife, and had probably lost much blood; so that, when Dr. Johnston saw her, she would be very much weakened and unable to stand much manipulation.

If, on massage with the hand over the abdomen, the uterus is found to become firm and its outline clearly defined, it is proper to employ Credé's method of delivering the placenta. But if the uterine muscle remains soft and flabby, it is not wise to push the Credé method, for fear of causing inversion. In such a case, the hand, with all proper precautions, should be introduced into the uterine cavity, and the placenta stripped off digitally, if possible. A good dose of pituitrin should be given by hypodermic injection and means taken to combat shock and collapse.

Inversion is a very serious accident and its mortality is high. When it occurs, an attempt should be made to reduce it as quickly as possible. But when the placenta is still abnormally attached to the uterine wall, I think it would be better to replace the organ before separating it. If this be found impossible after a reasonable time, the placenta should be detached and the inverted uterus replaced. If there is no alarming hemorrhage, no further manipulation should be attempted for a time, until the patient rallies.

If she survives, trial may be made to detach the placenta manually, the greatest care being taken against risk of infection. After emptying the uterus, an intra-uterine douche of hot, sterilized, normal saline solution should be given, and the patient carefully watched for signs of collapse.

Discussion by Dr. B. B. Parker, Allerton, Iowa

In the beginning I want to offer my thanks for the fact that in my locality there are no midwives.

Coming on the scene at the time Dr. Johnston did, almost any one would have followed about the procedure outlined, but I am convinced that there are some faults to find with it.

First, the Credé method of expression alone is not devoid of danger and may result in eversion of the uterus and, when combined with traction on the cord or placenta, is very apt to do so, if the placenta is unusually adherent. Correctly practiced, Credé's method only reinforces a contraction of the uterus and aids expulsion of the placenta. Too much force or force applied in the absence of uterine contraction or combined with traction on the cord or placenta is apt to cause partial or complete eversion.

Pituitrin will cause contractions of the uterus after the child is delivered quite as readily as before, and as the natural delivery of the placenta is accomplished by uterine contractions, I should have administered 1 cc. of obstetrical pituitrin and pursued a "watchful waiting" policy in this case.

I am convinced that manual delivery under aseptic precautions is less dangerous than traction upon the cord or placenta. Even after the damage was done, in my opinion, the whole mass should have been reduced and pituitrin injected intramuscularly. Separation of the placenta with the uterus everted opens up a vast bleeding area that is difficult to control quickly enough to prevent a fatality.

This case illustrates the fact that labor is not always a safe physiologic process, certain to result happily in any surroundings, as is apparently believed by the public in general and, I am sorry to say, by some physicians.

It is not agreed, by the powers that be, that pituitrin is useful or necessary or safe to use, but there are many of the "Country Brethren" who are saving time, suffering, and lives with it.

PROBLEM NO. 2

Presented by Dr. A. J. Annunziata, Bronx, New York City.

A butcher, aged 22, single, complained on June 10, last, of pain in the right lumbar region. He had had similar attacks before. The next day the pain extended somewhat to the other side also and there was malaise and anorexia. He received a purgative as a home remedy, but the next day I was called in to attend him. In addition to the symptoms mentioned he also complained of headache and weakness of the legs.

Physical examination revealed but slight increase in temperature, acute pharyngitis and suppurative tonsillitis. Heart and lungs negative. There was definite tenderness on pressure over the right lumbar region. That same evening his temperature rose, at first to 103° and later to 105°F. During the night he had a rather profuse epistaxis. The headache increased as did the lumbar tenderness, but no mass was palpable. The patient occasionally stated that the tenderness extended to the scrotal region, but there was no desire to micturate. Urinary analysis was practically negative. The condition became worse the next day, requiring the administration of narcotics. The temperature fluctuated between 103° and 106°F. The abdomen began to distend, but the tympany and tenderness were general. An enema produced marked relief, at least for a short period. At that time I made the tentative diagnosis of perinephritic abscess.

Late in the evening the temperature rose to 106°F., dropped to 104° early the next morning; again rising to 105.5° at noon.

A consultant hesitated between perinephritic abscess and retrocecal appendiceal abscess irritating the kidneys. Though I was convinced that this was not a case of "acute belly", I consented to hospitalization.

Soon after arriving at a well-known hospital that very evening, internes and attending men suggested typhoid fever and renal calculus as additional possibilities, but the general trend was in the direction of a renal affection. Urinary analysis was again practically negative. The white blood cell count showed 22,500 with 90 percent polymorphonuclears.

For the next five days the clinical picture remained practically unchanged and all examinations and cultures proved fruitless, though mention must be made that a nasal ulcer was found and treated by electrocauterization.

For one week the attendants had hesitated because none were absolutely sure or convinced that there was an appendiceal abscess, but with the development of a soft mass in the right lower quadrant operation was decided upon. A high gridiron incision was made and a sac was reached from which a considerable quantity of white, odorless pus was evacuated. As the mass was walled off, no search was made for the appendiceal stump. The wound was closed with drainage. The diagnosis still remained undecided.

The patient had a severe reaction the night of the operation, the temperature reaching 107°F., but the next day it dropped to 99°, and from then on ran a typical curve with an evening rise of several degrees. The patient complained of headaches again, which, however, may have been due to an increase of urea nitrogen.

The culture of the pus removed at operation showed Staphylococcus albus. Blood cultures continued to be negative. Pyelograms, which might have helped to clear up the diagnosis, were contraindicated by the patient's precarious general condition.

Two weeks after operation he complained of burning on urination. Analysis showed some albumin and numerous pus cells.

Three weeks after operation he suffered a severe attack of pain in the epigastrium and vomited bile and gastric contents. The next day there was a palpable mass in the right upper quadrant. As the temperature rose again and narcotics and topical measures brought no relief the upper abdomen was opened when, to the amazement of all, there presented itself an intensely inflamed gall bladder. Cholecystostomy was the only procedure possible in view of his emaciated condition.

The reaction after the second operation was less marked, but in about a week the patient seemed to be in *extremis*. The following day, however, his mind became rational, the pulse better and there was general improvement. The culture from the gall bladder showed Staphylococcus albus.

A week later he complained of pain in the right buttock. A diagnosis of gluteal abscess was made and the patient was operated upon. From that time until his discharge, as cured, on August 15th, the progress of his recovery was gradual and satisfactory. An idea of the gravity of this case can be obtained when it is stated that on admission to the hospital the patient weighed 170 pounds, while on discharge his weight was 110 pounds.

His recovery is now complete, the patient gained 40 pounds since he left the hospital.

Requirement. Critical discussion of the diagnosis and general criticism of the treatment.

(*Editor's Note*:—Dr. Annunziata has sent in a full description of this case with critical comments. Dr. Lake decided that the material was too valuable to go in as a mere case report, with which opinion I heartily agree. I believe the above problem to be one of the most interesting we have had in the Seminar. Here is an opportunity for old and new coworkers to show their diagnostic acumen—G.M.B.)

Clinical Notes and Practical Suggestions

The Southern Medical Association

THE Southern Medical Association is the second-largest group of medical men in United States and many look forward to its meetings as eagerly as they do to those of the American Medical Association.

The meeting this year was held in Atlanta, Georgia, from November 15 to 18, and was a delightful and highly profitable occasion.

Spring Street Viaduct, showing Atlanta's skyline

Atlanta is an interesting city, which gives the impression of a charming girl with a hole in her stocking and a rose in her hair. The people are whole-heartedly cordial and friendly and made us all feel at home at once. The reception given by the Fulton County Medical Society at their pleasing Academy of Medicine the evening before the meeting opened helped to do that; and at the reception and ball on Wednesday night they treated us like old friends.

For those who were more interested in recreation than in the scientific programs, abundant activities were provided. For the golfers there were two tournaments, and for the marksmen a trap shoot. Trophies were presented to the winners. All the golf and other clubs extended privileges to the visiting physicians. The Atlanta Athletic Club is one of the finest of its kind. There were also many interesting things planned for the ladies who came with their medical consorts.

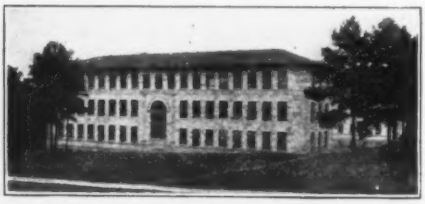
Although it rained all the first day, 1,082 physicians and 272 ladies registered. The grand total registration for the meeting was 2,630. Dr. J. Shelton Horsley, of Richmond, Va., was elected as the new president.

The programs bore the names of many celebrities in medicine and were exceptionally well conducted. One could actually go to a certain place at a certain hour and hear the paper or lecture one particularly wanted to hear. That is somewhat unusual at big meetings. We have a lot of fine material from these meetings which we will give you as fast as we can.

The commercial exhibit was a large and varied one, 63 firms being represented. Among the many new things shown we noted an adequate and accurate dropping attachment to be placed on an ether can; a *portable* ether vapor and suction apparatus which is small, simple in construction and positive and quiet in operation (this ought to be a boon to nose and throat men who sometimes operate away from their own hospitals); a mercury blood pressure apparatus which is so constructed that it can be guaranteed for the owner's lifetime against breakage and inaccuracy; and a small and relatively inexpensive machine for projecting all kinds of slides, arranged on a strip of film. Any speaker's personal slides can be prepared for use in this machine at small expense.

The Auditorium-Armory, where the meeting was held

The scientific section contained 18 separate exhibits, but some of these, particularly that of Emory University, were so large and varied that the material was abundant.



Emory University, School of Medicine

We visited Emory University, charmingly situated among the pine-clad hills, about three miles from the city, and saw the medical school and the fine, large hospital, where medical instruction of a high class is being carried on. We also visited the Steiner Cancer Clinic, in connection with the Grady Hospital, where they are doing splendid work in the study and treatment of this scourge of modern times. They have a gram of radium (worth somewhere near $100,000.00) and a delicate apparatus for drawing off the emanations and sealing them in glass "seeds". They are, however, making wider use of deep x-ray therapy than they are of radium, and their apparatus for these treatments is very complete.

Wesley Memorial Hospital at Emory University, Atlanta

It always does us good to get out and mingle with our colleagues from other places, to exchange views with them, cement old friendships and make new ones. It is also vastly helpful to hear reports of the splendid work which the students and researchers are doing and the seasoned opinions of the recognized leaders in the profession. We ought all to do more of this sort of thing.

If you live anywhere in the South you should begin, at once, to make plans for attending the 1927 meeting of the Southern Medical Association. It will make you an abler and a happier man.

Chicago, Ill. GEO. B. LAKE,

THE DECOMPENSATING HEART IN CHILDHOOD

It will be conceded by nearly everyone that the physiology and pathology of the circulation are modified at different periods of life by the processes of growth and development, by senescence and by the susceptibility to different types of disease. Cardio-renal-vascular disease is unknown in childhood, while rheumatic cardiac affections are most frequent in young life. In childhood, cardiac disease is seldom associated with chronic kidney affections, and rarely occurs secondarily to the pulmonary diseases, which are a frequent cause of heart strain and heart disease in adult life.

There are certain peculiarities in the cardiovascular conditions of childhood which may throw some light on cardiac pathology during the various age periods. The lumen of the large vessels in the newborn is relatively broad, and the whole arterial bed seems wider than in later life, due to the active growth of all the organs, though the growth of the lumen of the arteries is less proportionately than the growth in the heart volume. It is an important point in the pathology of the heart during the period of puberty that the arteries are relatively narrow, and that the heart volume increases at this period. The lumen of the capillary system in young childhood is also broad, and this seems to be associated with rapid growth in young individuals.

Severe cardiac breaks are frequently observed during early adolescence in children who had compensated lesions up to that period. Disturbances of the circulation result when the heart does not respond to the demands made upon it. This failure of cardiac response may occur while the patient is at rest, when he is engaged in active exercise, when he is acutely ill with a febrile disorder, or during anesthesia. Disease of the heart itself or other parts of the body which interfere with normal circulatory processes may tax the reserve strength of the heart to a varying degree. It is generally maintained, and there is considerable clinical evidence to support the view, that the child's heart has a large degree of reserve strength, and an extraordinary power of adaptability.

The most serious cardiac affection of childhood is chronic pericarditis, which in its acute stage may have been among the manifestations of a pancarditis or carditis. The progress of adherent pericarditis exerts an unfavorable influence on the heart. It causes hypertrophy and dilatation. Adhesions interfere with the normal growth of the organ, and decompensation may occur gradually or in some instances in a very brief time.

Cardiac failure or decompensation may be purely cardiac, or it may be primarily circulatory in origin, with secondary disturbance in the dynamics of the heart. In addition to the decompensation produced by the disease of the heart itself, grave cardiovascular conditions may be produced by disturbances in the vascular system, particularly during the acute infectious processes. The occurrence of this variety of circulatory disturbance is not sufficiently taken into account. Marked pallor of the skin is observed, which it is difficult to explain. It is not due to an actual anemia because it has been frequently shown that the hemoglobin and red count are not decreased.

Circulatory failure in the infectious diseases may be explained primarily by paralysis of the vasomotor centers, and it is doubtful if the heart participates at the onset. It has been observed that in pneumococcus infections, as in grippe and diphtheria, the heart does more work during the period of the infection than under normal conditions, and that although there may be some vascular paralysis and a threatened collapse the heart remains compensated for a time.

Treatment

In the true cardiac or congestive type, when the heart muscle is capable of meeting the demands made upon it at rest, but shows signs of failure or fatigue when subjected to strain or effort, it may be considered that there is a partial insufficiency, especially if dyspnea and palpitation follow exercise. In these children, activities should be restricted and long periods of rest prescribed. Tonics may be of value. The diet should be moderately restricted, and fluids should not be taken in excess.

Where congestive symptoms are manifest the use of digitalis is imperative, and it should be used according to the general rules governing its administration. Digitalis should not be used in cases where a congenital malformation of the heart exists, nor should it be used, even in small doses, in the treatment of any disease where there are no symptoms of heart-muscle insufficiency. It has been suggested that calcium chloride, given in combination with digitalis, increases its action and causes it to act more quickly. In some cases it may be advisable to digitalize the patient by giving maximal doses for three or four days.

Patients who show circulatory failure should be placed in bed as soon as possible. External heat should be applied, and hot drinks given if the patient is not nauseated or vomiting. Weak tea may be administered to infants. The cardiac stimulants are time-honored remedies, but opinion at present is not unanimous as to the value of these drugs in circulatory failure.

There is no universal agreement as to the value of digitalis in the treatment of circulatory failure during acute febrile conditions, although recent cardiographic studies show that digitalis exerts the same effect in these conditions as in the non-febrile state. Digitalis has not been found beneficial in the treatment of pneumonia in most instances, but if the heart is defective before the onset of pneumonia, or weakness of the heart muscle develops during the disease, it may be indicated.

The favorable effect of the external application of mustard in the form of baths or packs in circulatory failure of infants and young children has long been recognized, and is a valuable therapeutic measure.

Rest and sleep are important factors in the treatment. Excessive manipulation should be avoided, operative interference should be deferred and excessive treatment should be dispensed with. The surroundings should be quiet. Sometimes a moderate dose of paregoric in infants, or an appropriate dose of codeine or morphine in an older child, will do more to relieve circulatory failure than all other medication which may be employed.

ISAAC A. ABT,

From *Bul. Chicago M. S.*

SMALLPOX, CALCIUM SULPHIDE AND IODINE

In the October number of CLINICAL MEDICINE, page 741, there is an article on smallpox by Dr. Neave, of Dresden, Ohio, which is certainly interesting and descriptive of the conditions in question. I, too, have been through two epidemics of smallpox in the

last thirty years, and was County Health Officer in each case. I have seen the disease in the confluent form, and if anything is more revolting and sickening to observe, I fail to know what it could be.

The reason of this note is to relate one special case: a woman in confinement. This case was at its acme of hideousness; features and even body distorted; confluent form and one you could call practically rotten. Temperature 105.5°F.; pulse 180; respiration 28; and right at this critical stage this woman was confined. I delivered a female, well-developed infant, weighing nearly eight pounds; apparently healthy except for eight or ten fully-developed smallpox pustules (large). I had no hope in the least of saving the mother in that condition, but in ten days after confinement mother and child were doing well and made an uneventful recovery, except for pock-marks which both will carry through life.

My belief is that in this case, as in many others that I treated, the recovery was, in part at least, due to calcium sulphide, 2 grains, and echinacea, 1 grain, given every four hours. The physiologic action of the drugs accounts for my using both of them. Strong iodine lotion externally (1 ounce tincture of iodine to a gallon of boiled water) applied with a soft cotton swab, moistening the congested, inflamed surface often. It not only relieved the dreadful itching and burning, but rapidly ameliorated the foul odor and tenderness.

J. B. SMITH,

Warsaw, Mo.

SEX INSTRUCTION

A large percentage of all mental conflicts and abnormalities in adults and children are either directly caused or are colored by unfortunate attitudes or experience with the ever-present force called sex. There is no force in all mental life that is more urgent in its demands for some form of expression and none that society, the family, and the individual will allow less freedom.

The very fact that sex as a subject for discussion is always tabooed in the presence of the child accounts for the intense curiosity which many children develop at an early age regarding the subject. All too frequently the child's natural desire to be enlightened on this subject just as freely as on any other is met by cold reserve, a sharp rebuff, or a dishonest answer from one who in all other ways is a considerate and wise parent. It is therefore not surprising that the child soon learns to keep to himself the knowledge he has gained from his own investigations or has gathered from some more sophisticated playmate and soon becomes as self-conscious about his sex life as the parents are themselves.

A little child quickly senses a tense atmosphere and embarrassment on the part of the adults when faced with his eager questions, and because of this he is apt to follow one of two lines. Disconcerting those with whom he comes in contact may please him, so that he will continue his questioning at most inopportune times, or he may be made so ill at ease and self-conscious that he determines never to be placed in such a position again if he can help it, and therefore ceases to bring his puzzles and problems to his parents, who should stand ready to help him over the hard places. Because he stops his questioning and seems uninterested is no sign that he is no longer filled with curiosity over these mysterious things which seem to be so shocking. He may be quietly using every means available to find out in other ways the answers which he wants to know but which he will no longer ask.

The parents must free themselves so far as possible from self-consciousness when the subject is mentioned. Clear, frank answers suited to the child's intelligence and development will satisfy his interest for the moment, whereas emphasizing the matter by "hushing the child up" and telling him it is "naughty" to talk of such things will make him only the more determined to find out why, and what it is all about.

D. A. THOM,

Boston, Mass.

GHOSTS AND INDICAN

This title seems peculiar for a medical article, but, like the Mikado's punishment, "it fits the crime".

This is a little personal experience that may come to anyone and doctors are just as liable to be the subjects of ghostly visitations as any other class of human beings.

The trouble began early in 1926 with an attack of bronchitis and, while this was under control, there was loss of appetite, occipital headache, general lassitude and marked anemia. My weight at this time was 120 pounds.

It was now that the ghost appeared. The continued loss of weight with the anemic condition and several similar symptoms,

fixed the trouble in my mind as pernicious anemia, and no amount of reasoning at this time could change my mind or free it from the idea that my voyage of life was near its end.

About the middle of July, I was in a garage, watching the repairs to a friend's car, when suddenly my thoughts reverted to the rubber heels on my shoes. This continued for, probably, two or three minutes and my next finding was: at full length on the floor with my head on my friend's knee. I had been unconscious for three or four minutes.

My friend said to me, "This is the end of your nonsensical idea that you have pernicious anemia. You are going to have a blood test and a urinary analysis and give up this thought that your end is near. I know that you have no fear of the end, but that 'cuts no ice'. There is a lot of service in you yet and we are going to put you in shape to render that service."

I consented to the blood test and uranalysis. My weight at this time was 108 pounds.

Blood test: Hemoglobin, 60; color, pale; leucocytes, 2500; all of which accounted for the anemia.

Uranalysis: Specific gravity, 1010; color, light-amber; albumin, marked trace; indican, largely in excess; granular casts, few; pus cells, few; epithelial shreds, few.

When I saw the result of the uranalysis my ghost took wings and departed for the place ghosts are supposed to inhabit and I was markedly relieved.

My friend advised five grain doses of calomel, followed by Epsom salts the morning after, with methenamin intravenously.

I thanked him for his advice, but said that now that I knew my condition I should do my own prescribing, which I did as follows: calomel, 2 grains, in divided dose for five nights, followed by Epsom salts each morning.

For urinary treatment my prescription was: arbutin, 1 grain, because of its affinity for albumin and its antiseptic properties, due to its decomposition within the system into hydroquinone; boldine hydrobromate, 1/32 grain, for its effective action on the liver as well as its action in increasing the elimination of solids in the urine; hydrastoid, 1/6 grain, for the irritation of the urinary tract; and asparagine, 1/64 grain, as a diuretic. This prescription I took every two hours during the day, and for the anemia, I took iron and quinine arsenate with nuclein twice daily.

At the end of five days my appetite had increased, headache had vanished, anemia was improved, and my weight was 111 pounds. Uranalysis: Specific gravity, 1015; color, amber; albumin, faint trace; indican, largely decreased but still in excess; granular casts, two found; pus globules, very few.

I continued treatment for another five days when I had a final uranalysis, as follows: specific gravity, 1025; albumin, none; indican, still present but largely decreased; microscopic examination, negative. My weight at this time was 115 pounds.

I feel that I have recovered from an unnamed condition, other than indicanuria. While it is not uncommon to find indican in the urine of healthy people, it is the excess which I have myself experienced and with which I have come in contact during the past summer when the thermometer has seldom shown less than 94° in the shade, that has interested me in this hepatic and urinary disorder which has apparently been epidemic in this section of our country.

I have treated several cases as I treated myself and always with the same good results.

It is my experience that calomel alone does not act on the indican contained in the urine, but when the boldine is added the effect is noticeable from the first dose. I give six granules during the day and two at bedtime which, while giving free hepatic action, also acts in promoting sleep.

W. T. THACKERAY,
Fowlerton, Texas.

PROFESSIONAL SPORTSMANSHIP

After reading the article on ultraviolet therapy by Dr. Spitz (CLIN. MED., Aug., 1926, p. 575) and the reply by Dr. Warnshuis (CLIN. MED., Nov., 1926, p. 813), I am forced to say my "bit".

In the August number of *Medical Economics*, page 28, is a letter I wrote to the editor of that journal that applies very well to above argument of Dr. Warnshuis.

We, as physicians, are too busy reading, studying, attending medical society meetings and attending to the needs of the sick to indulge in a lack of sportsmanship. None of us are past learning from the others. The best of us can always learn *something* from the poorest of us. Our private disagreements are bad enough without putting them in print.

I would not have written had not a chiropractor "joshed" me about doctors quarrel-

ing with one another, citing the article in question.

E. J. HAY,

Rogers, N. M.

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[There is much merit in Dr. Hay's suggestion, and we feel that Dr. Warnshuis was a bit acrimonious in his rejoinder to Dr. Spitz. Courtesy and sportsmanship should be universal among physicians.

On the other hand, we all want to know the *truth* and to find it we must hear both sides of a question. We feel that we owe it to our readers to let them hear both sides, but we endeavor to eliminate all personalities and unpleasantness from such presentations.

Let us have free discussion of all moot subjects, by all means; but let us be gentlemen, sportsmen and professional brethren, always, and thus confound those who are watching for our feet to slip.—ED.]

CONSULTATION REQUEST

We earnestly desire professional assistance in the management of a case which presents a variety of symptoms and difficulties. The patient is the wife of one physician and the mother of another and deserves all the help we can give her.

Case Report.—Mrs. M.; age 63.

Family History.—Father died at 65 from some lung condition; mother died at 70 odd from uremic poisoning or cerebral hemorrhage, due to some form of toxemia; oldest brother died at 56 from some similar condition; another brother died at 38 with a diagnosis of tuberculosis, which seems unlikely, as a large thoracic aneurism had eroded his seventh and eighth dorsal vertebrae; one brother died of pneumonia, at 38 years, and two are living and well, one at 68 years.

Personal History.—Mother of three children, all born normally. Badly infected teeth afflicted her for years but were extracted and a denture fitted in 1907. Has suffered with an apprehension neurosis for twelve or fifteen years. In 1901 she had a severe attack of abdominal pain, suggesting appendicitis, but refused operation; since when she has had occasional attacks of lower abdominal pain, with moderate rigidity and tenderness. Formerly constipated, but now this alternates with diarrhea. In 1912 she passed blood from the bladder, suggesting kidney stone, but this cleared up. Four years ago she vomited a considerable clot of blood. In 1922 diabetic symptoms developed and sugar appeared in her urine. She has been "neurasthenic" and subject to "smothery" spells for many years. Gynecologic history, negative. There are no masses nor tenderness in the breasts, but a few drops of blood have issued from one nipple, monthly, for the past two years. Has never had a chronic cough.

Present Condition.—Patient is confined to bed most of the time and appears cachetic. Present weight, 150 pounds (normal, 200). She suffers from pain in some part of the body all of the time, most constant and severe in the subscapular region. Her mind is clear and active, but she is very melancholy. Much of her nourishment is vomited, but no blood now appears in the vomitus.

Physical Examination.—Temperature subnormal; blood pressure 115/80; on diabetic diet, urine is acid, with specific gravity 1010; glycosuria is controlled by pansecretin, three tablets before meals; she has a moderate sized aneurism, probably of the right subclavian or innominate artery, which has not increased in size for several years; no abnormality can be detected in the abdomen; special senses, normal; coal-tar analgesics give her more or less relief from pain and she refuses to take opiates.

This has been a difficult case to handle, as many of our suggestions as to diagnostic procedures, in years past, have been refused. We would have had roentgenograms made years ago, but she declined. Now it appears impossible, as there is no radiographer in our town and she is too weak to make a trip. Her neurotic condition has negatived many of our efforts at treatment.

Can any of our professional brethren offer any suggestions for ameliorating the condition of this patient?

DRS. MEEK AND HARDING,

Ashdown, Ark.

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[The report of this case, as given, sounds very discouraging and there seems little prospect that the patient's life will be greatly prolonged; however, until we have a more complete picture, the prognosis cannot be definite. There should be a complete *blood examination* (red, white and differential count; blood chemistry for sugar and nonprotein nitrogen; hemoglobin); a complete *quantitative* uranalysis of a twenty-four-hour specimen — chemical and microscopic — with special attention to sugar, acetone and diacetic acid, indican, *degree*

of acidity and urea; an analysis of the vomitus for free and total acidity, free HCl and the presence of occult blood and other abnormal constituents; daily measurements of temperature, pulse, respiration, blood pressure and urinary sugar for several days; and any other measure which can shed more light on the case. Without this information, suggestions as to treatment must be tentative.

There seems to be, among other things, a high degree of toxemia. This might be relieved somewhat by daily, high colonic irrigations with physiologic saline solution or something else which the nature of the case will suggest to the attendants. If the skin is dry and inactive, brief hot packs might be helpful. All physical methods must be carried out very gently because of the aneurism.

It might be possible to control the vomiting by giving three grains of anesthesin a few minutes before each feeding. In that case, the diet should be increased, giving, especially, a good deal of milk or buttermilk, fruit and vegetable juices, custards, jellies and the like.

It might be a profitable plan, since this patient exhibits symptoms of starvation, to give dextrose (glucose) intravenously or by mouth or rectum, together with enough insulin to burn it (1 unit of insulin will burn *10 to 15 Grams* of dextrose). Sufficient dextrose should be administered to control the symptoms of starvation acidosis.

If the case progresses, as seems likely, and the prognosis becomes hopeless, morphine should be given, if needed to control pain, without the patient's knowledge.

This is as far as one seems justified in going until we have more information.

Free discussion of this problem will be welcomed.—Ed.]

TEN HEALTH COMMANDMENTS

The Reverend Doctor Henry Hugh Procter in a sermon at the Nazarene Congregational Church, Brooklyn, N. Y., in urging yearly physical examinations as an important part of insurance against disease, gave ten commandments for health, which, as stated in the *New York Times* of May 31, 1926, were as follows:

1.—"Honor your parents by having a thorough physical examination every birthday; for an ounce of prevention is worth a ton of cure."

2.—"Honor your friends by taking a daily bath; for cleanliness is a part of godliness."

3.—"Honor your family by having your life insured; for life insurance guarantees the cooperation of the insurer in the prolongation of the life of the insured."

4.—"Honor your physicians by avoiding patent medicines; for most of these nostrums are humbugs."

5.—"Honor your stomach by having your teeth carefully examined by a dentist at regular intervals; for bad teeth are an abomination to the system."

6.—"Honor your digestion by being careful of your diet; for many a man digs his grave with his teeth."

7.—"Honor your lungs by breathing fresh air; for ventilation is a means of grace."

8.—"Honor your nerves by taking plenty of rest in sleep; for they who work all day and play all night promote the brevity of their lives by burning the candle at both ends."

9.—"Honor your country by obeying the law; for it is a mark of good citizenship to obey a law whether he likes it or not."

10.—"Honor your God by chastity in word, thought and deed; for the race that wishes eternity must exalt maternity."

THE MANAGEMENT OF FRACTURES

The trend of opinion regarding the treatment of fractures at the present time is to employ less immobilization and more active and passive movement. It is movement that produces callus, not immobilization.

Fixation of a limb after a fracture and continuing this conditon for five or six weeks, causes other disabilities that outlast that of the original injury. There is the stiffness of the joints and tendons, and the atrophy of the inactive muscles to be overcome after the splints have been removed.

Fixation should be for the minimum period, a week or two, to secure proper alignment of the bones, then with the appearance of the soft callus, only sufficient splintage is required to prevent angulation.

Those who have treated a Pott's fracture by the old method of enclosing the limb in plaster of Paris for eight weeks, know that another two months usually passed before the released ankle became servicable. In children a normal joint may be immobilized for weeks without impairment of function, while the same treatment in an adult results in weeks of disability.

Although early movement is desirable, no undue strain is permissible until much later.

As shown in the accompanying views, the soft or homogeneous callus appears early and is later supplanted by laminated bone. Also, marked anatomic displacements of fractured ends often unite, not only without deformity but frequently without visible signs of previous injury.

R. STEWART MACARTHUR,
Los Angeles, Calif.

Fig. 1.—Oblique fracture of the femur in a child of 18 months.

Fig. 2.—Same femur as Fig. 1, after five years, showing complete obliteration of the injury.

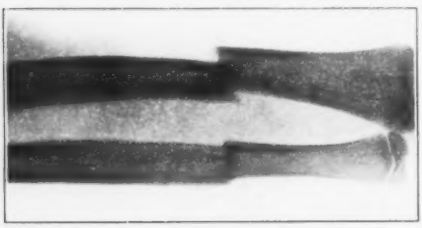

Fig. 3.—Fracture of the radius and ulna at 14 years of age.

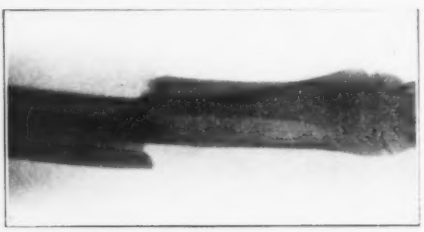

Fig. 4.—Lateral view (same patient as Fig. 3).

Fig. 5.—Same arm as in Fig. 3, at 19 years of age.

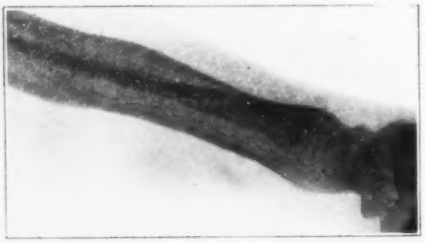

Fig. 6.—Same arm as in Fig. 4, at 19 years of age.

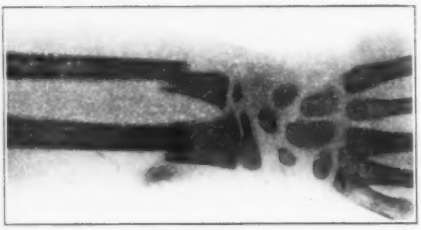

Fig. 7.—Fracture of the radius and ulna in a boy, 9 years old.

Fig. 8.—Callus formation at the twenty-first day.

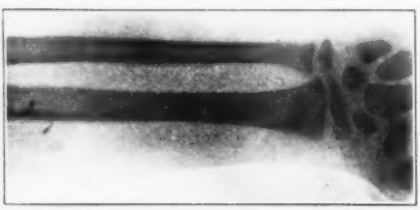

Fig. 9.—Same arm as Fig. 7, after one year.

LOBELINE AND MAGNESIUM SULPHATE IN TETANUS (?)

About twelve days ago, a young man cut his foot badly and, being out in the country, he gave it but meager attention. Some days ago he told me about it, but said it had not hurt him to amount to anything.

After the wound had healed, I was called, with the information that his head and neck were hurting him and that his jaws were stiff.

I thought I could guess the trouble, so I prepared myself with lobeline sulphate tablets, 1/150 gr., and a 25-percent aquaeous solution of magnesium sulphate, and went to see him. At once he received 1/35 gr. lobeline sulphate, hypodermically, and 15 cc. of the magnesium sulphate solution injected, into the gluteal muscle. He yelled fearfully, but was soon relaxed, became easy and had a good night's rest.

Every two hours, since the first day he has been given 1/50 gr. lobeline sulphate and other symptomatic treatment not so important. I have repeated the magnesium sulphate injections (15 cc. of a 25-percent solution) in the gluteal muscle every day, and I now feel that I have saved his life. Had the case been neglected a few days more, I believe he would surely have died.

L. H. HENLEY,

Claremore, Okla.

STATEMENT OF THE FACTS AND OPINIONS AGREED TO BY THE INTERNATIONAL MEETING ON CANCER CONTROL HELD AT LAKE MOHONK, N. Y., U. S. A., SEPTEMBER 20-24, 1926

Although the present state of knowledge of cancer is not sufficient to permit of the formulation of such procedures for the suppression of this malady as have been successfully employed for the control of infectious diseases, there is enough well-established fact and sound working opinion concerning the prevention, diagnosis and treatment of cancer to save many lives, if this information is carried properly into effect.

1.—The causation of cancer is not completely understood, but it may be accepted that for all practical purposes cancer is not to be looked upon as contagious or infectious.

2.—Cancer itself is not hereditary, although a certain predisposition or susceptibility to cancer is apparently transmissible through inheritance. This does not signify that, because one's parent or parents or other members of the family have suffered from cancer, cancer will necessarily appear in other persons of the same or succeeding generation.

3.—The control of cancer, so far as this subject can be understood at the present time, depends upon the employment of measures of personal hygiene and certain preventive and curative measures, the success of which depends upon the intelligent cooperation of the patient and physician.

4.—Persons who have cancer must apply to competent physicians at a sufficiently early stage in the disease, in order to have a fair chance of cure. This applies to all forms of cancer. In some forms early treatment affords the only possibility of cure.

5.—Cancer in some parts of the body can be discovered in a very early stage, and if these cases are treated properly the prospect for a permanent cure is good.

6.—The cure of cancer depends upon discovering the growth before it has done irreparable injury to a vital part of the body and before it has spread to other parts. Therefore, efforts should be made to improve the methods of diagnosis in these various locations and the treatment of the cancers so discovered.

7.—The public must be taught the earliest danger signals of cancer which can be recognized by persons without a special knowledge of the subject, and induced to seek competent medical attention when any of these indications are believed to be present.

8.—Practitioners of medicine must keep abreast of the latest advances in the knowledge of cancer in order to diagnosis as many as possible of the cases of cancer which come to them.

9.—Surgeous and radiologists must make constant progress in the refined methods of technic which are necessary for the diagnosis and proper treatment not only of ordinary cases but of the more obscure and difficult ones.

10.—There is much that medical men can do in the prevention of cancer, in the detection of early cases, in the referring of patients to institutions and physicians who can make the proper diagnosis and apply proper treatment, when the physicians themselves are unable to accomplish these results. The more efficient the family doctor is, the more ready he is to share responsibility with a specialist.

11.—Dentists can help in the control of cancer by informing themselves about the advances in the knowledge of the causes of cancer, especially with relation to the irritations produced by imperfect teeth and improperly fitting dental plates. They can also help by referring cases of cancer which they discover to physicians skilled in the treatment of cancer in this location. It may be doubted whether all dentists fully realize the help which can be obtained from x-ray photographs in revealing not only the state of the teeth but the condition of the bone surrounding them.

12.—Medical students should be instructed in cancer by the aid of actual demonstrations of cancer patients, and this to a sufficient extent to give them a good working knowledge of the subject.

13.—The most reliable forms of treatment, and, in fact, the only ones thus far justified by experience and observation, depend upon surgery, radium and x-rays.

14.—Emphasis should be placed upon the value of the dissemination of the definite, useful and practical knowledge about cancer, and this knowledge should not be confused nor hidden by what is merely theoretical and experimental.

15.—Efforts toward the control of cancer should be made in two principal directions: (1) the promotion of research in order to increase the existing knowledge of the subject, and (2) the practical employment of the information which is at hand. Even with our present knowledge many lives could be saved which are sacrificed by unnecessary delay.

COLD BATHS

Many people have reverted to the cold "morning tub", as this essentially English custom is usually called.

There are, of course, some who heroically brave this ordeal the whole year around, to their benefit, or, at any rate, without obvious harm; but many others follow it from mere slavish custom without questioning the "pros" or "cons".

In man, as in all warm-blooded animals, a practically constant temperature is maintained under the most varying conditions, and so important is this that nature, in the course of evolution, has provided him with a nervous regulating mechanism to maintain this uniform condition. The chief source of heat in the human body is from muscular contraction, whether due to voluntary active exercise or to the involuntary muscular contractions of the heart and other organs. The chief avenues of loss of heat are from the external surface, by a dilation of blood vessels and evaporation of sweat.

Let us see how these principles show themselves in practice.

On a hot day we are instinctively quiet and inactive, and so diminish the amount of heat the body produces. Moreover, the superficial blood vessels dilate, permitting sweating, and so increase the loss of heat, both actions tending to counteract the increased external temperature.

On a cold day, on the other hand, we are tempted to be active, and, failing that, we shiver, which is Nature's automatic attempt to produce more heat. Moreover, the vessels in the skin contract, less blood goes to the surface, and less evaporation takes place.

Now all these actions, which have as their object the attempt to keep a uniform temperature in spite of varying external thermal conditions, are governed automatically by a portion of brain known as the heat-regulating center. It is therefore obvious that Nature intends man to maintain a constant mean temperature, which is essential to his well-being.

It must follow, then, that to jump straight out of a warm bed the first thing in the morning and plunge into a cold bath is unsound physiologically. It is, in fact, an act against the effects of which Nature is constantly trying to guard us, and its indiscriminate use can only be condemned. How often has one heard the warning, "You'll catch your death of cold", when a person leaves a warm room to go out of doors on a cold day without extra clothing; yet the change here is not nearly so violent as that involved in the cold plunge.

How is it then that the virtues of the cold bath have been extolled so long? The explanation is simply this: It is a physiologic law of life that "use makes perfect" and facilitates a function. The repeated cold plunges train the heat-regulating mechanism to respond more readily to lowered temperature—a very important advantage.

This perfecting of the heat-regulating center enables an individual to adapt himself automatically to any sudden change, and hence to escape more easily the catching of colds. In fact, the system is strengthened against the conditions found in Great Britain.

In old and delicate people, the response is not marked, and for these the "cold tub"

is unsuitable; in fact, those in whom a feeling of warmth and exhilaration does not immediately follow should avoid cold baths altogether.

B. SHERWOOD-DUNN,

Nice, France.

[The cold or cool shower or spray, particularly if it follows a warm spray, affords practically all of the advantages of the cold tub, minus its disadvantages. The succession of warm and cold water exercises the muscles in the skin to the best advantage, and as the parts of the body are stimulated in *succession*, and not simultaneously, the dangers of shock are minimized.

Now that one can purchase a spray apparatus which can be attached to any bathtub for from 75 cents to $2.00, there seems to be no reason why everyone except the very old and frail and people with serious heart lesions or something of the kind should not enjoy the benefits of the exhilarating and healthful "morning shower". —ED.]

DEAD HORSE BUSINESS

When I was a boy I lived in a small town in what would now seem almost like the frontier of civilization. I arrived there at an early age (in fact I was born there) and was brought up under the prevailing customs of those times.

My father was a physician and he used to travel to and from his patients on horseback or in an open, two-wheeled sulky which was later exchanged for a buggy. He was college bred, a graduate of Williams and of the Albany Medical College, and was looked up to by his professional brethren in later years as a more than ordinarily able and successful physician.

My first medical work (if I except the hitching up and care of his horse) was in posting his books. His charges for services would spell starvation now—five dollars for obstetrics, seventy-five cents for visits, twenty-five to fifty cents for office calls, twenty-five cents (one way) for mileage fees and thirteen cents (later increased to twenty-five cents) for pulling a tooth (they did no "extracting" in those early days). All of these charges included necessary medicines. And practically everything went on the book to be paid for, if it ever was, at a later time and perhaps then by note or supplies of some kind in barter.

But he was not the only one who did business that way. The merchants sold their groceries and dry goods and hardware on this same credit plan; the boot and shoe makers sold us our footwear or cobbled up our old ones in the same way; and our tailors and wagon makers and blacksmiths and coffin makers all fitted us out on this same handy and liberal plan. The only ones who balked at that practice were Uncle Sam and our new railroad, after we got it. We couldn't buy postage stamps or railway tickets on credit.

After a time someone, somewhere, discovered that it seemed like a hardship to pay for a service which had long ago been rendered or an article which was nearly worn out and almost forgotten; and it was likened by us simple people of those times to paying for an animal that was dead. Hence, the saying "paying for a dead horse" came into vogue, as applying to the credit business, looked at from the debtor's standpoint.

This seeming ill fortune to the debtor, together with the more exacting demands of some creditors, finally resulted, after long years of sad experience to both, in doing away with much of the credit business in the rural retail trade. But there are two classes of tradesmen who haven't seen the light as yet; the doctors and the auto dealers, including the gas-filling stations. Of course, we have no interest in the latter unless we, too, buy or are forced by necessity to get our fuel and repairs on time; and then the "dead horse hardship" is eventually brought home to us the same as to others.

Most doctors are poor collectors and so help to make poor payers of their patrons. If they could place themselves in their client's shoes they might appreciate more fully their feelings when finally called upon to make such "dead horse" settlement. Reasonable credit is commendable and unavoidable, but long-time credit has the stench of carrion.

Rural doctors are in a different position from their city brethren. They need *some* compensation for *all* the work they do, for they can't get *big* fees for *any* of it; nor can they collect a fancy price from one to make up their loss on another patient. Strangely enough, these poor "simpletons" object to paying other people's bills even more strongly than they do to paying for their own dead horses.

Of late there has been a movement among doctors in certain sections of the country to improve the financial condition of the medical profession. But it has not taken deep

root as yet. City doctors seem to think that big fees are the panacea, but the rural men want better collections and less loss. If the country practitioners had a say in legislation or in the affairs of the large medical societies they might get some action toward the improvement of their own material interests.

Perhaps, after all, the matter of credits is a problem for individual attention and our losses from dishonesty and our own indifference to the "dead horse" sentiment are the penalties we pay for our poor business sagacity and methods.

CLARENCE KING,

Franklinville, N. Y.

—

[We are convinced of two things: first, that any physician who really makes up his mind to do it can bring his patients to the cash or prompt payment basis within a reasonable time, if he is willing to bear a certain amount of extra effort and unpleasantness *at the start;* and second, that few doctors realize the immense influence they could wield if they would lay aside all petty jealousies and personal dislikes and *cooperate heartily* for the good of the group.

If the physicians in a town would all pull together they could do a great work in educating the community along health lines. If all in a county would work shoulder to shoulder they could materially influence state and national legislation of all kinds, including the policies of the larger medical groups.

Make people stop "paying for dead horses" and get acquainted with your brother practitioners—they may be fine fellows!

Some of you must have tried plans like this. Do your duty and tell the rest of us what you did and how it worked out. These economic questions are almost as important as the professional ones, and CLINICAL MEDICINE AND SURGERY wants to help you, in every possible way, to be *better doctors.* Give us your assistance.—ED.]

BLOODLETTING*

Bloodletting, which was used almost universally a hundred years ago and then fell into disrepute, is now being practiced with excellent results, not as a general rule, but in carefully selected cases.

In 1924, Grinker advised that the letting of 10 to 12 ounces of blood is very helpful in the milder cases of apoplexy, in robust and plethoric patients. If premonitory symptoms appear, the attack may even be prevented by prompt phlebotomy.

Be sure to *bleed enough* if the method is to be used at all. From a pint to a quart of blood may safely be removed, even from rather frail persons, if the case has been well chosen. In some cases as much as two quarts should be removed. Watch the blood pressure (with the cuff on the other arm) and be on the alert for symptoms of hemorrhage, such as air-hunger.

In some cases it is better to bleed from an artery than from a vein. The artery can easily be reached at the bend of the elbow and a small puncture here is sufficient. It is good technic to enter the vessel with a fairly large needle and to receive the blood in a graduated vessel, so that the quantity removed can be accurately checked.

Remember that patients who die after severe apoplexy generally succumb to cerebral *anemia,* due to increased intracranial pressure resulting from extravasated blood and edema of the brain. In such cases the blood pressure rises because the heart is trying to force blood into the cranial cavity. Do not bleed patients like this.

On the other hand, old patients with weak hearts frequently die from acute cardiac dilatation. Bloodletting might be helpful in such cases and, if the cerebral hemorrhage was small, it might save life.

Bloodletting produces excellent results in certain cases of *eclampsia* and, in robust patients, in the early stages of *pneumonia.* In eclamptic cases the blood pressure should be reduced as low as is possible without causing undue acceleration of the pulse rate. A fall from 240 to 140 mm. of mercury has been followed by recovery.

G. B. L.

*Notes from a discussion by Drs. D. H. Cunningham, Cassius Rogers, Carl Beck and A. C. Tenney before the North Shore Branch, Chicago Medical Society, December 7, 1926.

CONSTRUCTIVE WORK IN THE PREVENTION OF DISEASE

In 1925, fifty school physicians examined 148,000 Chicago school children, the majority of these being kindergarten and first grade pupils.

110,000 children were found to have various physical defects serious enough to require treatment.

101,000 children examined were found to have defective teeth.

61,000 children had diseased tonsils to a greater or less extent.

36,000 children were found with defective eyesight.

33,000 children were afflicted with adenoids.

27,000 children were found to be undernourished—virtually starving in the midst of plenty.

2,610 children were found to have heart trouble.

The underlying conditions favoring disease are to be found in anything that lowers resistance or the power to prevent disease. The various physical defects as enumerated are some of the factors that break down health or do not permit good health to get a start in the child.

Through the advice, encouragement and direction of the school doctor and nurse, working together, 43 percent of these 110,000 defective children sought relief.

Thousands have been cured and more thousands have been helped by the physicians and dentists of Chicago. More cooperation on the part of the parents and physicians is needed to make the correction of physical defects 100 percent.

The improvement of the physical condition of the school children means:

1.—Lowered death rate.

2.—Longer life.

3.—A foundation for adult good health.

4.—Greater mental and physical efficiency.

5.—Increased resistance to disease.

6.—Lowered cost of education by eliminating failures and repeaters.

Have the child of pre-school age physically fit for school. Do it now!

HERMAN N. BUNDESEN,
Health Commissioner,
Chicago.

TREATMENT BY MAIL

Your article, "Professional Courtesy", on page 773 of the November issue of CLINICAL MEDICINE, I think is a gem. I wish every doctor in the United States could read it. Every county medical society should have a copy and the secretary should be asked to read it at every January meeting.

Incidentally, I think our diagnostic clinics might read this article with benefit, too. My experience has been that my patient returns with explicit directions as to what is to be done for him and he has a copy of all material sent me. If I see any reason to change the schedule after personal observation it is difficult to do so, as my patient knows what was mapped out and has to know why the change is made.

I have decided never again to be an unofficial observer to "Treatment by Mail", no matter if it is given by ethical men of international reputation. I feel that I am more capable of treating the patient, after a diagnosis has been made, *when I am observing him*, than *any one* is to treat him *by mail.*

M. O. ROBERTSON,
Bedford, Ind.

THE TREATMENT OF PNEUMONIA

I agree with Dr. Osler, that treatment—*such as he advises*—is absolutely without value to cure or to cut short pneumonia, but I have proven, by over twenty years of experience, that there is a treatment for this disease as clearly indicated as is the use of antitoxin in diphtheria and almost as striking in its results and, like antitoxin, it is more effective the earlier it is used.

I believe we all agree that the first stage of pneumonia is a congestion of part of the lung. That being so, rational treatment must aim at relief of this congestion before the second stage, or stage of consolidation, follows. This is best accomplished by calomel, followed by salines. I believe the use of castor oil or an ordinary cathartic pill is of little use. You will also notice that I say *salines*, not a saline. This means that salines should be given repeatedly, at hourly intervals, until there are several free, watery movements of the bowels; that is, until the fecal matter is removed from the bowels and the lymphatic system connected with the bowels is depleted. When we have accomplished this, we have developed a condition which will drain the surplus of blood which has been going to the lungs into this depleted area, provided we do not furnish fluid to it from a more easily accessible source. So, for the first thirty-six to forty-eight hours, the patient should be given very little fluid. We would not expect to empty a system of water pipes by drawing out from the bottom and pouring just as much into the top, and it is just as foolish to attempt to relieve these over-filled blood vessels of the lungs while giving large quantities of liquids.

At the same time this treatment is being carried out, I give aconitine hydrobromide, gr. 1/800; Digitalin, gr. 1/60; Strychnine arsenate gr. 1/120 ("dosimetric trinity"), every half hour if the temperature is above 102°F; every hour if 102° to 100°; every two hours if below 100°. At the same time,

I use counter irritation to the chest, my preference being for mustard, used until the skin of the chest is red; then camphorated oil, followed again by the mustard.

If this treatment is intelligently administered, in most cases there is no second stage, and consequently, no increasing toxemia, due to gradual suffocation. The disease ends by lysis and, by the third day, we have a convalescent patient.

This is an outline of the main treatment I employ. As adjuvant treatment, I use nuclein to increase the white blood cells and calcidin to supply calcium to the blood and for the iodine effect.

Someone asks, "Do you use alcoholic stimulation?" No! I see no sense in making a heart go faster when it is already going too fast, but, he says, "What about the Crisis?" There isn't any such thing, if the case is treated as outlined.

If you are called after the first stage is passed the same treatment will modify the second stage. Your patient will escape the toxemia and cyanosis of slow suffocation, and the heart will be relieved of an overload.

If you think, at the first call, that your patient is too weak for this depleting treatment, support him by epinephrin, hypodermically administered, as much as twenty minims every two hours, and give the treatment. Get him unloaded; give him a chance to get some air and you have increased his chance of living.

LUTHER EMERICK,

Saugerties, N. Y.

THE RECTUM AND FOCAL INFECTION*

In considering sources of focal infection the rectum is generally overlooked, but is, none the less, in many cases, the seat of the trouble from which the patient suffers.

In order to make reliable diagnoses of rectal conditions one must study the anatomy and physiology of the rectum very thoroughly and let this knowledge enter into all decisions.

The *pectinate line* divides the rectum into two very different portions, having a different blood, lymph and nerve supply. Blood from above the pectinate line returns through the portal system; from below, through the vena cava: Lymph from above drains into the lumbar and sacral glands; from below, into the inguinal glands: The nerve supply, above the line, is from the sympathetic; below, from the cerebrospinal system.

Most pathologic conditions in the rectum are found near the pectinate line. Here there are crypts, diverticula and innumerable recesses where infection may enter and lie more or less dormant for years, pouring into the system poisons which may give rise to such conditions as eczema and diabetes.

Fistulæ are described, according to the position of their internal openings, as anal (opening below the pectinate line) and anorectal (opening above the pectinate line). The latter type should be completely excised: The former may be treated by means of the seton or ligature.

In diagnosing *anal fissures*, remember that the "sentinel pile" is practically pathognomomic. *Ulcerations* will usually show a morning diarrhea of mucus and blood.

Hemorrhoids should always be very carefully studied, not only as to position but also as to their condition—whether or not they are the seat of infection. Cancer of the rectum is always secondary and is *preventable* by getting rid of chronic infections.

If hemorrhoids are found to be infected they should be treated by the open method, to facilitate drainage. Next to this (for internal hemorrhoids only) is the injection method or electrolysis (electro-coagulation). Both of these methods give good results in properly selected cases.

For *pruritus ani*, anesthetize the area with injections of a ½-percent solution of procaine and then inject 1:3,000 hydrochloric acid all around the perirectal region.

G. B. L.

*Abstract of a lecture by Dr. J. R. Pennington before the North Shore Branch, Chicago Medical Society, December 7, 1926.

REDUCTION OF MATERNAL MORTALITY

As outlined in a recent report issued by the Children's Bureau of the U. S. Department of Labor, the morbidity and mortality of mothers in the United States, during pregnancy, labor and the puerperium, is unduly high.

After giving some very interesting statistics bearing upon this subject, collected by Dr. Robert M. Woodbury, the report outlines a preventive program, as follows:

1.—Regulation of the practice of obstetrics, by requiring a license to practice from both physicians and midwives; by establishing minimum requirements for obtaining such a

license; and by defining and prescribing penalties for malpractice.

2.—Regulation of public and private hospitals and maternity homes through legal provisions governing the establishment of such institutions and requiring that they be licensed and subject to inspection.

3.—Legislation for the control of venereal diseases, including the making of these diseases reportable.

4.—Requiring that puerperal septicemia be made reportable, as is now the case in a number of states.

5.—Provision through Governmental or public sources of better facilities for training medical and nursing personnel and more adequate clinics, hospitals and maternity homes.

6.—Subsidies in aid of State or local activities by Federal or State governments, as in the United States during the past four years through the Maternity and Infancy Act.

7.—Educational work directed toward informing mothers of the need of adequate maternity care.

THE MYSTERY OF FATIGUE

There were once two friends, of the same age, and whose daily work was very similar. One was a healthy individual with an easy laugh, and the other wore a scowl and annoyed everyone by constantly complaining about his headache and his fatigue. The latter's friends became conscience stricken, however, when one fine day the tired one had a breakdown and had to go to the West for his health. "We thought he did it to get attention," they said. "Why is it that Bill, who works harder, puts on weight and goes on his jovial way without a single hitch?"

Fatigue had been the second man's enemy. But not from too much hard work at his regular job. He had encouraged the poisons of fatigue to accumulate in his body by monotonous, uninteresting living, unnecessary mental strain and worry and a great deal of self-pity.

Such is the mysterious power of fatigue. It is not only labor that makes us tired. If we work a normal number of hours every day, get good and tired and then sleep it off, rest has given Nature a chance to wash the fatigue poisons out of our systems, and we are better off for the labor as well as the relaxation. But monotony and worry are creators of fatigue, to which most of us give little or no thought. A mechanic who comes home "dog-tired" after a day on the job, changes his thoughts and rests his body during an evening at the movies. The man at the desk, on the other hand, needs to rest his mind with some sort of physical exercise in order to drive the blood from the base of his brain. Variety is more than the spice of life; it is one of its *essential fundamentals*.

There are more ways to rest than by sleeping or lying down. Rest and recreation may be found in walking, playing golf or tennis, reading a book, or in any other change from routine. But which of these is "rest" for a given individual depends upon what his body needs most at the time, in order to complete a well-balanced physical and mental life. The business man who uses his brain all day should avoid talking shop in the evening or studying subjects that require hard concentration. The housewife's fatigue is the result of monotony as much as of labor. Cooking three meals, mending and disciplining the children, day after day, for years, has doubtless ruined the good dispositions of numberless women. As outdoor picnic, a drive in the park, a few weeks at the seaside are legitimate medicines for such ills; and a more serene and efficiently run household will be the result.

Over-fatigue very often shows itself first by irritability, listlessness and a rundown condition, both in adults and in children. Parents should consider the amount of sleep, quality of food and the mental activities of a growing child before condemning him as "lazy". One of the chief causes of lack of energy and endurance is malnutrition. This may mean not only insufficient food, but also the wrong kinds of food or monotony in diet. If the body is not well nourished it cannot create sufficient resistance to throw off the germs of tuberculosis and other infectious diseases.

It is altogether normal and healthful for us to work until we are tired, but—watch out for headaches, nervousness, loss of appetite and "grouchiness". They may be the danger signals of over-fatigue.

HELENA LORENZ WILLIAMS,
New York City.

The Leisure Hour

Conducted by GEORGE H. CANDLER, M.D.

Cracked Pots

"LET every woman keep a school for every man is born a fool". From somewhere out of the air these words floated in to me recently and "stayed put". The succinct truth they convey was further borne in on my mentality when, in investigating the mental pabulum of a 15-year-old high-school girl, I read "The Plastic Age", heralded as "the most widely discussed (and *cussed*, probably) novel of the season; now in its seventh printing".

The reviewers—some of them at least—approve highly of Percy Marks' production. The Boston *Transcript* considers "the sex questions very boldly handled indeed": they are! The Brooklyn *Eagle* is grateful because Mr. Marks "uses slang adroitly and convincingly" and so "is easy to read". This reviewer (he must be a recent college product) sagely remarks "the students may *read* the speeches of Cicero but they *speak* in the phrases of Petronius." The Dallas *News* thinks "The Plastic Age will prove startling to most folks who have not had personal contact with any of the typical American colleges and universities the last few years."

The book *is* startling, not because it presents any really *new* "problems of personal conduct" or sheds any helpful light on the pathway the man who would secure an education must follow, but because it reveals the increasingly luxuriant growth of noxious weeds in the college garden: makes evident the result of "taking down the barriers" and compels *men* to realize that, however indefensible some of their own early actions were, those of their sons and daughters, if measured by the standards heretofore observed, are not simply "unspeakable" — because we are all talking about them—but deplorably degrading!

The things Percy Marks depicts in "The Plastic Age" have, of course, existed in every college to a greater or less extent; for that matter, have existed and will exist wherever a number of young males are banded together. There have been "muckers" and *men* in every school, cads on every campus and Bayards and libertines in every fraternity. The startling thing is the scarcity of Bayards and the preponderance of "muckers" at Sanford! Still more offensive to the senses is the calm general acceptance of "petting parties" and orgiastic brawls in fraternity houses where "nice girls" up for "prom" cease to remain "nice" girls and, pie-eyed, retire from the dance floor to darkened rooms with "the blond or brunet beast" striking their heated fancy. There we are told many of them "go the whole way"—a naive expression, worth thoughtful analysis. Most of us, having "pasts", will realize that, under certain circumstances, this completion of the journey is to be expected—is indeed (barring unforeseen interruptions) quite inevitable —but we also know that very, very often it is *not* the "whole journey"—just the beginning of one which may lead to Happy Valley (tho' by a devious route), but more often to arid and thorny wastes. Surely, even in these days of sex equality and self-expression, any college man not a "mucker" of the worst variety, will maul the fellow who attempts *that* kind of thing with his sister! Even the "mucker" will flare up and do something violent if one were to assert that *his* mother used, in days gone by, to "pie-eyed" retire with some nice chap and "go the whole way" with him! If, then, *his* sister and mother are to be thoroughly "nice" under any conditions, why may he render some other man's sister "off" or make unworthy of future right motherhood some "bag" who has been supplied with too much bad booze?

THERE, of course, is the old, old question that, to my knowledge, has never been satisfactorily answered. The Plastic Age offers no solution. Hugh, the hero, tackles the problem, is very severely tempted,

nearly falls, but is saved by a more sophisticated friend, first because he "knows the girl", and second, because he admires the virtues Hugh still possesses and he has lost.

Hugh—full of booze again—is also (later) saved from too intimate association with two frank "rats"—"rotten, stinkin', goddam rats"; in the language of Petronius—Sanfordized—while his room-mate, refusing rescue, continues the adventure and later, together with half a dozen other men, has to leave college "by doctors' orders". Infected, despairing, he begs Hugh to "keep away from women" and, scared stiff, Hugh decides that all "bags" are bad for a man and his safety lies in eschewing their society. He does this (for a while) and then thinks he is really in love with one, who turns out to be a very ardent girl, but both of them, after one narrow escape, decide that "it is not *love* but 'sex' attraction". They part, but time develops the fact that love and sex attraction are, after all, Siamese twins and we are afforded an interesting view of two young things trying to find themselves. Old stuff, hoary stuff, jazzed up to meet the modern taste by a writer who probably wrote his first theme about the time the Tango was introduced. Still he must have *some* traditions, for, running like a golden thread thro' a very offensive woof, there is a warp of decency—of *noblesse oblige*. Even at Sanford one or two men are "gentlemen"—and openly, or secretly, admired for being such.

The utility or even desirability of college life is quite frankly discussed by fraternity men in "Bull" session assembled and also by a Prof. who manages to impart more useful information in one short peroration than his hearers had received elsewhere in full three years. The age of general unbelief in everything established is frequently reached during college years and the Sanford men milled around in a mental haze even as their fathers and grandfathers milled. Of all their instructors only the one had sense enough to make them grasp the fact that understanding comes only by experience and that the experiences they had been going thro', disappointing as they might be, were necessary to the acquirement of further knowledge.

Those who have traveled many miles on the road of life are apt to become unduly cynical and, unhappily, too many men fail to recall the visions, delicious fallacies and follies of their own youth, when considering the acts or mental processes of the adolescent they are supposed to guide and guard. Too often the charge brought by one Sanford man, "Our parents lied to us about everything from our infancy," is not without foundation and as a result one is not surprised to hear him confess that he never tells his people anything worth while. He, like most of his fellows, is "on his own", without belief in anything or real affection for anyone to influence his actions. That which comes his way he takes and his physical urgings entirely overshadow those promptings which we may best describe as spiritual. One feels that the soil at Sanford is sour and producing more tares than wheat.

The mature man or woman can undoubtedly read "The Plastic Age" with advantage, but, unhappily, it is chiefly the callow youth and flapper type of female who devour its pages, relishing highly its salacious flavor and chortling over the "goddams", "hells", "Christs", and "Cripes" with which the chief juveniles emphasize their remarks.

If the modern collegian really *is* the smutty, gin-drinking, "bag"-busting cribber so graphically portrayed in this novel, then, to be up to date there, youngsters must follow suit and a further four years at college will be enough to make worse than useless monkeys out of material that properly handled will develop *men* and, unless all signs fail, there is going to be a decided shortage in that crop within the next few decades! Not that we're all "going to the bow-wows" or that the generation now coming on differs fundamentally from its predecessors, but because the vices which grandpa indulged in shamefacedly and secretly are now practiced openly and even boasted of and, more important still, because the socalled old-fashioned virtues are laughed at, not by young *men* only but by the women of their own age who must, in the course of things, become the mothers of their children.

Respect for "father" and real love for "mother" have saved hosts of men from destruction, and belief in the purity of women and an innate feeling that dirt is DIRT and to be avoided by decent people, is not less desirable today than it was five, ten or twenty decades ago. Take away love for and real confidence in "Dad" and mother; make Home only a place to go to when nothing's stirring elsewhere; remove belief in the purity and sweetness of the "girl friend"; and top all this with an absence

of any religious faith and the young man of today hasn't very much to build *real* character on, has he?

One reads books that are destructive; one sees pictures upon the screen which are demoralizing; one hears music which is frankly lascivious and one feels that, day by day, his own youngsters are growing away from him. Not as youngsters used to "grow away" from their parents, but in a new and vaguely disastrous manner. They KNOW MORE in their teens than you are supposed ever to have known or even to be capable of understanding. They ridicule the things you revere and ultimately come to regard you as merely a useful source of supply—something to be tolerated because useful, but not to be admitted to close confidence.

Whether the parents themselves are not greatly to blame for this state of affairs is a question *they* must answer. Whether they can change or at least modify conditions before it is everlastingly too late is another problem they alone can solve. Perhaps after reading "The Plastic Age" they'll realize that the clay came into *their* hands first: they are the Potters and the shape of the finished product will depend to a great extent upon how *they* guide the wheel.

Plasticity of the young and a too placid placidity of their parents ends in cracked pots!

G. H. C.

WISHES AND DESIRES

The unsuccessful have wishes; the successful have desires.

A wish you do not expect to get; a desire you will see that you do get.

A wish gratified is a surprise party; the attaining of a desire is no picnic.

To wish is to believe in fairies; to desire is to believe in yourself.

A wish comes prepaid and delivered; a desire comes F. O. B., C. O. D. or before.

A wish is a gift; a desire is a demand.

A wish is a suspended sentence; a desire a life sentence.

A wish accepts substitutes: a desire abhors imitations.

A wish is a hand-out; a desire is a workout.

A wish is a masquerader; a desire a sleep invader.

A wish doesn't increase the blood pressure; but you will perspire and expire for a desire.

A passing fancy will give birth to a wish; only the death rattle will release a desire.

A wish has no backers; a desire is backed by your will and your faith.

Wishes go with spring days, babbling brooks, azure skies, buzzing bees and spring fever. Desires go with perspiration, callouses, straining backs, and midnight oil. Like the lillies in the swamp muck, desires are the more beautiful for their surroundings.

When night and day are found together, wishes will become desires.

—Chester H. Struble in *Nautilus*.

"My girl has very sore feet. What would you suggest?"

"Rubber heels."

"What with?"

An inferiority complex is a state of mind that causes a fellow to throw down the best hand in a poker game.—*Florence (Ala.) Herald.*

News quickly spreads. After a sleepless night, a hero suffering from toothache, told of his woes to an enthusiastic believer in the Coué system of optimistic auto-suggestion.

"You must repeat over and over again this phrase; 'Get thee behind me, pain!" he was told.

"What!" gasped the disappointed man, "and get lumbago?"

Patient (nervously): "And will the operation be dangerous, doctor?"

Doctor: "Nonsense! You couldn't buy a dangerous operation for forty dollars."

Doctor: "What! Your dyspepsia is no better? Did you follow my advice and drink hot water one hour before breakfast?"

Patient: "I did my best, but I couldn't keep it up more than ten minutes."

"Ah, sir," said Mrs. Higgins plaintively to the vicar, "since my 'usband 'ad two parallel strokes, we 'aven't been able to make both ends meet."—*The Boston Transcript.*

Patient: "What's the birth rate in this country, doctor?"

Dr. Childs: "Well, mine is $50,00."

He: "When I was young, the doctors said that if I didn't stop smoking I would become feeble-minded."

She: "Well, why didn't you stop?"

Diagnostic Pointers

TRAUMATIC PSYCHOSES

Following accidents (especially railway and automobile accidents) and operations it is not very uncommon to find a patient developing an acute mental disturbance, from mild hysteria to severe mania, as a result of the bombardment of the thought centers with the suddenly presented new ideas. It corresponds to surgical shock, on the physical side. Treatment is symptomatic and recovery usually prompt.—DR. FRANK W. PORTERFIELD, in the *Surg. Jour.*

SARCOMA IN CHILDREN

A rapidly-growing tumor in the kidney region in a young child is highly suspicious of sarcoma. Operation, to be successful, must follow an early diagnosis.—*Urol. & Cutan. Rev.*

MENTAL DEFECTIVES AND CRIME

Fear of punishment does not deter a moron from committing crimes. It is not a problem of law, but of preventive medicine. We must handle this condition as we would a communicable disease; but to do this successfully there must be cooperation between parents, guardians and the medical profession.—HERMAN N. BUNDESEN, Health Commissioner, Chicago, Ill.

COLD AND SUDDEN DEATH

Mortality from organic heart disease, cerebral hemorrhage and chronic nephritis is low when the temperature is high and high when it is low. Patients who are exposed to the lethal effects of these conditions should be warned of the danger attendant on exposure in cold weather.—DRS. BUNDESEN AND FALK, in *J. A. M. A.*

SKIN TUBERCULOSIS

Be careful to consider the possibility of tuberculosis in an apparently simple impetiginous lesion of more than three months' standing, about the face.—*Urol. & Cutan. Rev.*

INDICATIONS FOR MASTOIDECTOMY

Pain and temperature are not always criteria of the condition in mastoiditis.

Do not wait to see the ear standing out from the head and a big, boggy mass behind the ear.

A high leucocytosis, bacteremia and twitching of the facial muscles (due to irritation of the seventh nerve) are indications for prompt mastoidectomy.

It is better to open the mastoid unnecessarily than to wait too long.—DR. JOSEPH BECK, of *Chicago.*

VOMITING OF PREGNANCY

In the vomiting of pregnancy, as in that of hysteria, it is better, as soon as the emesis is controlled, to feed the patient *solid* food.—DR. KARL THORSGAARD, Chicago.

TARANTULA BITES

The sting of the tarantula has been proved, upon scientific investigation, to be little or no worse than a bee sting.—*Science News-Letter.*

NASAL SINUSITIS

Many cases of sinusitis are called "catarrh". Headache and postnasal discharge are pathognomomic of sinus disease. Acute sinusitis usually recovers under relatively simple treatment; chronic cases only after operation and prolonged treatment. — DR. IRVING W. VOORHEES, in *M. J. & Rec.*

HIGH BLOOD PRESSURE AND THE KIDNEYS

If the blood pressure is above 200, *always* investigate the kidneys *thoroughly.* The condition is probably due to nephrosclerosis. —DR. GUSTAV KOLISCHER, of Chicago.

SKIN TESTS FOR ALLERGY

Skin tests for protein sensitiveness should be performed in the following classes of patients:

1.—All infants and children with recurrent bronchitis or "colds".

2.—All individuals with attacks of urticaria, of angioneurotic edema, or of eczema.

3.—All infants and children with gastrointestinal disturbances not explained by indiscretions in diet.

4.—All infants and children with exudative diathesis or persistent enuresis.

5.—Any individual giving a bizzare history of aches, pains, migraine or peculiar sensations without any apparent anatomic

basis, in whom an eosinophilia or a dermographia can be elicited without the presence of intestinal parasitic infection or hyperthyroidism; also in those complaining of polyuria without any metabolic, cardiorenal or genitourinary disease and in those running an afternoon temperature without the evidence of tuberculosis, or foci of infection.—DR. NATHAN S. SCHIFF, in *Ann. Clin. Med.*

INTOLERANCE TO ARSENIC

Look out for a little thickening of the skin of the palms—keratosis—as an early sign of intolerance to arsenic.—*Urol. & Cutan. Rev.*

ACUTE MASTOIDITIS

Not every case of acute mastoiditis requires operation. The cases must be carefully studied and, if operation is necessary, it must be done at the proper time.—DR. JOSEPH BECK, of Chicago.

PHYSICAL DEFECTS IN CHILDREN

You cannot correct physical defects in children too early if you would have them progress normally in mental and physical growth. Moreover, orrection of physical defects increases resistance to communicable diseases and thus helps to lower the death rate.—DR. HERMAN N. BUNDESEN, Chicago.

INDICATIONS OF RENAL DISEASE

Toxic symptoms not obviously referable to some other cause—nocturia, arteriosclerosis, hypertension, secondary anemia, and failing vision—if not otherwise explainable, call for careful and repeated examinations of the urine, with a comparison of morning and evening specimens. Evening urine may show abnormalities absent in the morning. —DR. H. LEON JAMESON, in *M. J. & Rec.*

NEPHROSIS

In nephrosis there is no elevation of the blood pressure and no change in the blood chemistry. The *urinary chlorides* are always decidedly decreased, but the edema fluid contains an excess of chlorides (8 to 10 percent).—DR. GUSTAV KOLISCHER, of Chicago.

DEFINITION OF STILLBIRTH

For registration purposes, stillbirths should include all children born who do not live any time whatever, no matter how brief, after birth.—*Bulletin* 108, *Bureau of the Census, Dept. of Commerce and Labor.*

TUBERCULOSIS OR THYROTOXICOSIS?

In making a diagnosis between tuberculosis and hyperthyroidism, remember that the tuberculous patient generally has a poor appetite and the thyroid patient an exceptionally good one.—DR. DIETRICH KLEMPTNER, of Chicago.

PAIN IN THE CHEST

Neglect to make use of x-rays in the examination of the chest in patients complaining of pain in that region has been the cause of failure to recognize several cases of aortic aneurism. When so simple a method of correct diagnosis exists, it is sad to know so many cases of this condition still await discovery in the postmortem room.—BRUCE BRUCE-PORTER, *The Practitioner.*

Current Medical Literature

ETIOLOGY OF MUMPS

Dr. Yves Kermorgant has carried out some very interesting experiments regarding the etiology of mumps. He has isolated a spirochete from the salivary secretions of patients suffering from the disease; grown these organisms in cultures; produced typical parotitis and orchitis in monkeys by inoculation; obtained a lysin and an agglutinin from recovered individuals; and successfully vaccinated animals. His results are reported in the *Bul. de la Soc. de Pediat de Paris* for January, 1926.

This discovery of a spirochete as the cause of mumps explains the spinal fluid lymphocytosis associated with this disease and accounts for its relapsing course and its transmission from the salivary to the genital glands. In these respects it resembles syphilis and typhus.

A valuable suggestion as to treatment is also offered for, if mumps is a spirochetal disease, it should be amenable to parenteral treatment with the arsenicals.

THERAPEUTIC USE OF EPHEDRINE

Two European clinicians, Drs. Leo Pollak and Walter Robitschek, have reported their results with ephedrine in the *Wien. klin. Wchnschr.* for June 24, 1926.

They feel that its chief use, in internal medicine, is for the relief of bronchial asthma. The results following its use are slower and more lasting than those produced by the hypodermic injection of epinephrin but otherwise resemble them very closely.

Relief was experienced by each of 16 asthmatic patients who took ephedrine by mouth, provided the dose was large enough. Two severe cases were only slightly relieved by this drug, but they had also failed to respond to epinephrin. Very favorable results were seen when the patients took half the usual dose as soon as the *first symptoms* of an attack appeared, the paroxysm being prevented in most cases.

In the asthmatic state, where dyspnea is constant, 50 mgm. of ephedrine, three times a day, gave great relief. It should be remembered that this drug, like epinephrin, is not a cure, but merely a palliative for asthma. Its great advantage over epinephrin is that it may safely be placed in the patient's hands for oral use as conditions require.

Its effect on the heart and circulation suggested its use in other conditions.

A case of acute alcoholism, with scarcely perceptible pulse, received 60 mgm. of ephedrine hypodermically and showed prompt improvement. A woman convalescing from pneumonia who constantly had a systolic blood pressure less than 100 mm. was given 50 mgm. daily for two weeks. The blood pressure slowly rose to 145 mm., but the patient complained of palpitation and dizziness. The dose should be carefully regulated.

When a barium meal is given, followed by 20 drops of a 10-percent solution of ephedrine, by mouth, strong peristalsis is observed after 30 to 60 seconds. This is the same result produced by hypodermic injections of epinephrin, but occurs more promptly, showing that the effect is directly on the stomach or by a short reflex.

The normal dose for relieving asthmatic attacks is 100 mgm. (1½ grains); for the chronic asthmatic state, 50 mgm. (¾ grain) should be given 2 or 3 times a day.

The symptoms following its use are palpitation, trembling and headache, but these are milder than when epinephrin is injected, and many patients have no subjective reaction following 100 mgm. On the other hand, patients with a sensitive vasomotor system experience marked symptoms after 50 mgm. For this reason the dosage should be small at first and gradually increased until the limits of the patient's tolerance are established.

EARLY SYMPTOMS OF PERNICIOUS ANEMIA

Despite a wealth of literature on the subject, the etiology of pernicious anemia is still a mystery and the early symptoms are almost equally so, for most of the classical manifestations of the disease are found only in the later stages, after the chance of a cure is practically gone.

In the *J. A. M. A.* for December 11, 1926, Dr. A. L. Skoog, of Kansas City, Mo., offers some suggestions which sound very reasonable and interesting.

Achlorhydria and achylia gastrica appear early—in some cases a number of years before any other signs—and are present at some stage in 98 percent of cases.

The blood picture varies to a considerable extent, the *high color index* being the most constant and characteristic finding.

Neurologic symptoms appear fairly early and regularly, manifesting in the spinal cord, the peripheral nerves and the brain. Among the earliest of these are tingling and numbness in the fingers and feet and impaired joint and bone sensibility. Neuritis and mild psychotic manifestations are not uncommon.

Concerning the etiology, Dr. Skoog calls attention to the facts that the disease almost always appears, in typical form, between 40 and 60 years of age and that the blood-forming organs, the gastrointestinal system and the nerves are always more or less

affected. All of these organs are largely or wholly controlled by the autonomic nervous system. The initial symptoms of the disease may well be concerned with pathologic physiology only.

The theory is advanced that the primary cause or causes lie in the vegetative nervous system and that all of the later signs and symptoms are the natural and logical results of this perverted physiology. Pernicious anemia occurs largely among the hypertensive and more highly civilized persons and among males three times as often as in females. All of these things point to the possibility that anxiety and the stresses and strains of life may be the basic factors in the etiology of this disease.

The author summarizes his findings and reasoning from them thus:

1.—Three main tissue systems are exceedingly important in the symptomatic and diagnostic considerations of pernicious anemia. Evidence of varying types of subacute combined degeneration of the spinal cord without inflammatory changes will be found in more than 85 percent of all cases of this disease.

2.—For a reasonably accurate clinical diagnosis of pernicious anemia with subacute combined degeneration of the spinal cord, an achlorhydria and a volume or color index greater than 1 are essential.

3.—Abnormalities of the flora and pathologic toxins in the small intestine may be secondary or terminal states.

4.—Physiologic or pathologic changes in the vegetative nervous system may be considered the primal source of the trouble. Especially is the solar plexus involved. Continuous emotional strains resulting from anxiety and worry are potent factors in the early etiology.

SPASM OF THE GLOTTIS

When inspiration is impeded, the sufferer is always very uncomfortable, and total inability to draw air into the lungs, as in complete glottic spasm, is terrifying to the patient, though not dangerous unless it is due to some serious condition such as tabes (laryngeal crises) or thoracic aneurism.

In the *Lancet* for July 3, 1926, Dr. Harold Barwell, of London, discusses this condition and suggests as causes (aside from ordinary "choking" on a foreign body) any lesions producing irritation of the recurrent laryngeal nerve, such as tumors or aneurism of the neck or mediastinum; central nerve lesions, as tabes, where this symptom frequently appears early; and hysteria.

The attacks may be acute and complete or persistent and partial.

Treatment is based upon an accurate diagnosis of the cause and the removal or amelioration of any underlying pathology.

In an acute attack the patient's fears should be allayed and he should be encouraged to take slow, careful, gentle breaths through the nose. The inhalation of amyl nitrite is often helpful, especially in the laryngeal crises of tabes. The inhalation of chloroform, short of anesthesia, always relaxes the spasm if time permits its use. A hot sponge applied over the larynx is sometimes useful.

In the persistent form, an emetic such as ipecac or tartar emetic, usually brings relief.

As a prophylactic, general tonic and hygienic measures are indicated, following correction of the etiologic conditions, when found. Moderate doses of bromides are occasionally useful.

SILVER PROTEIN PREPARATIONS

In the *J. A. M. A.* for August 7, 1926 (p. 430), are found the results of examinations of the various silver protein compounds, both "strong" (protargol type) and "mild" (argyrol type). All of those examined were found to comply with the provisions of the U. S. P. X. The three "strong" preparations varied among themselves in silver content only 0.3 percent. The "mild" ones varied much more, up to a maximum of 6.9 percent, argyn having the most silver (26.3 percent) and argyrol the least (19.4 percent).

HYDROTHERAPY IN MENTAL DISEASES

The use of water in the treatment of disease goes back to 4000 B. C., or even earlier.

In the *M. J. and Record* for December 15, 1926, Dr. Arthur H. Ring, of Boston, states that to obtain satisfactory results from hydriatic measures we must know the state of the patient's vegetative nervous system, in order to decide upon the severity of the treatment; we must decide whether sedative or stimulating effects will be most beneficial; and we must know the physiologic effects of the various hydrotherapeutic procedures.

Water at or near the temperature of the body (98.6°F.) is neutral and sedative in its effects. As the temperature varies from that point, above or below, it becomes more and more stimulating, and the application of hot or cold water for its tonic effects is one of the best methods for reaching and toning up the vegetative nervous system.

The prolonged neutral tub bath, where the patient is immersed in water at 96° or 97°F. for from half an hour to several hours, is valuable in insomnia, disturbed mental states and chorea.

The wet pack and hot spinal fomentations are also useful for promoting quiet and inducing sleep. The latter is also of great value in backaches.

The stimulating treatments act by producing an active hyperemia and the magnitude of the effects depends upon the duration of application, the temperature and the pressure.

The mildest stimulating treatment is the simple rain or body needle douche, beginning warm and reduced to as low a temperature as the patient will stand. This may be preceded by a few minutes in the electric light cabinet, accompanied by a salt

rub, and varied in temperature, duration and force to suit the case.

The Scotch douche is for robust patients, especially alcoholics. It is preceded by the electric light cabinet, until free sweating is produced; then a warm shower to rinse off. Hot water (105°F.) and cold (65°F.) are then played upon the body alternately with a hose, at twenty to thirty pounds pressure, for two to four minutes. This is second only to exercise as a stimulator of metabolism.

MILK INJECTIONS IN SYPHILIS

In the *Ohio State M. J.* for April, 1926, Dr. Weirauk reports that he has treated several cases of syphilis affecting the skin by injections of boiled milk, with good results in all cases.

One case was a tubercular syphilide of the shoulder; two of squamous tertiary syphilis of the palms; and two of ulcerating gummas of the legs. The cases were of from 10 months' to 5 years' duration and, after treatment, showed complete recovery in three cases, with 60 and 90 percent improvement, respectively, in the other two. Seven injections of boiled milk were given at intervals of 3 days.

In all cases, not only were the local lesions cleared up or improved, but the general and subjective symptoms were markedly ameliorated and there was a gain in weight and strength.

The heavy metals universally used in the treatment of syphilis tend to depress the natural defensive powers of the body, and if milk injections will stimulate these their use will prove well worth while.

"MILK SICK," OR WHITE SNAKEROOT POISONING

Many people know that cows develop "milk-sickness" or "trembles" after eating *Eupatorium urticaelfolium*, commonly known as white snakeroot or squaw weed, but not so many are aware that human beings who use the milk—or butter made from the milk—of these cows also become seriously ill and frequently die.

In the *J. A. M. A.* for August 21, 1926, Dr. W. E. Walsh, of Morris, Ill., describes the condition known as "milk sick" and reports several cases.

The symptoms are: Loss of appetite and vague distress or moderate pain in the stomach, sometimes with vomiting; general weakness, particularly in the legs, with sensations of extreme fatigue; subnormal temperature and a fast, weak pulse; the heavy, sweetish odor of acetone on the breath and diacetic acid present in quantity in the urine, but no sugar; if vigorous exercise is indulged in, especially late in the disease, coma, resembling that of diabetes, may supervene and death result. Autopsy shows that all organs, especially the liver and pancreas, have undergone extensive fatty degeneration.

In cases showing these symptoms prompt investigation should be made of the sources of all milk and butter recently used, in order to confirm the diagnosis.

The treatment, which should be begun at once upon making a tentative diagnosis, consists in complete rest and giving 2 Gm. of sodium bicarbonate and 4 Gm. of magnesia magma, every hour and after vomiting, until the bowels move freely. Enemas of 60 Gm. (2 ounces) of sodium bicarbonate in 385 cc. (12 ounces) of warm water should also be given every 4 hours until the urine becomes alkaline. The treatment is continued until a 10-percent solution of ferric chloride ceases to give a mahogany-colored precipitate in the urine. Where vomiting is continuous, a teaspoonful or two of dextrose may be added to each enema, and in severe cases the dextrose may be given intravenously, with enough insulin to burn it. Whisky seems to relieve the gastric spasms.

The diet should consist of skimmed milk, orange juice and custards.

Vigorous exercise is dangerous for a long time after recovery.

IRRADIATION OF DISEASED TONSILS

In the *M. J. and Rec.* for Dec. 1, 1926, Dr. J. Coleman Scal, of New York, describes a new method of treating tonsillar hypertrophies by means of removable platinum radon seeds, giving detailed reports of a series of cases where tonsillectomy was for different reasons contraindicated, and illustrating the application of the technic to varying pathologic conditions.

To carry out the application of the seeds, a new implanter is used which is illustrated and described in the article.

As the pain of implantation and removal is practically *nil*, at no time is any anesthetic required, there is no need of hospitalization, nor is there disability of any kind. The total absence of shock is a great advantage in inoperable cases.

By means of the implanter the operator is able to place one removable radon seed in the center of a tonsil so that radiation is distributed equally throughout. The radon seed used is filtered by 0.3 mm. of platinum. This filtration cuts off the caustic beta rays, thus doing away with all possibility of burning, with consequent necrosis and sloughing.

When the instrument is withdrawn after implantation the seed is left imbedded in the tonsil with a 2 cm. length of thread protruding from the portal of entry. This short thread does not in any way inconvenience the patient, nor cause the slightest interference with function. At the end of four days the seeds are easily removed by grasping the thread with forceps.

The point of the trocar is so fine and the seed so small that very little trauma is done to the tonsil.

The amount of radiation can be measured with accuracy and the applicators located with such exactness as to insure equal and complete distribution throughout the tis-

sues. Only one treatment is necessary, a fact much appreciated by the patient. Systemtic reactions of any kind never occur. The attached thread, making the seed easily removable when its period of service is over, does away with an objectionable foreign body being left in the tissues—a drawback to the bare tube method. The author concludes that, in the implantation of removable platinum radon seeds, we have at present an adequate substitute for tonsillectomy in those cases where surgery is, for any reason, contraindicated.

The technic and method described in this article have been developed by Dr. Joseph Muir, of New York.

NEW IDEAS ON MALARIA

The treatment of paresis by inoculating the patients with malaria has afforded exceptional opportunity for the detailed study of the latter disease. As a result of such studies, Lt. Col. S. P. James, of the Indian Medical Service, has published an interesting paper which was reviewed in the *Indian Med. Gaz.* (through *International Med. Digest*).

Colonel James declares that the classical picture of tertian malaria, with recurring paroxysms occurring every 48 hours, is that of a *secondary or relapsing* infection, and not of a primary infection.

In the primary infection the incubation period is 7 to 23 days. The patient then develops a gradually increasing fever lasting from 2 to 5 days and beginning to remit only near the end of this period. *There are no rigors at this stage.*

After an intermission of 24 to 48 hours the second stage begins, with rigors and fever repeated *every day.* This lasts for 10 days or longer and is followed by the third stage, showing the paroxysms occurring every 48 hours. The attacks diminish slowly and, in favorable cases, a clinical cure is established.

STATIC ELECTRICITY IN INFLAMMATIONS

When inflammation is allowed to continue for some time, hyperplasia follows. It is therefore of prime importance that congestion and swelling be relieved as promptly as possible, and Dr. William Benham Snow, of New York, reports in the *M. J. and Rec.* for December 15, 1926, that he believes static electricity is the best agency for accomplishing this purpose.

There are three important physiologic effects of static electricity: The direct removal of infiltration and exudation in the tissues; the relief of muscular tension; and the favorable effect on metabolism produced by the surging current. It has been used with good results in neuritis, sciatica, Bell's palsy, coccygodynia, poliomyelitis, arthritis, prostatitis, pelvic conditions, visceral congestions, exophthalmic goiter and the pain, swelling and muscular spasm following injuries. Stress is laid upon the fact that this agency should *not* be used where pus or infectious material is present.

In summing up his work, Dr. Snow states that:

1.—The peculiar effects of the static current are derived from the fact that it is a direct or constant current of high potential and therefore possesses the characteristic qualities of the constant current in inducing direct muscular contraction of the muscle cells.

2.—The effects of the static current important in therapeutics are: (a)—The mechanical removal of infiltration from engorged tissues where no infection is present; (b)—Complete relief of tense muscles, thereby overcoming muscular contraction associated with the inflammatory processes; (c)—With the general administration of the one pole agency, it has a remarkable effect in improving local and general metabolism.

3.—There is no other electrical current at present available possessing the same characteristics and capable of the same therapeutic effects as the static agencies, and, from the fact that it is so remarkable in its influence upon inflammatory conditions, it is indispensable for prompt and complete relief of those conditions.

In the same journal Dr. Mary L. H. Arnold Snow recommends the static wave current, static sparks, the brush discharge and static induced current in gynecology, because of their powers in reducing congestion and infiltration of the tissues.

Dr. Snow uses the static current in treating acute and chronic inflammations of the vagina and uterus, amenorrhea, dysmenorrhea, vaginismus, subinvolution and various other disorders. She frequently uses diathermy, in addition to the static treatments, and concludes that:

1.—The static current favorably affects stasis when the inflammation is noninfectious in character.

2.—Stasis with active or passive congestion is the representative factor of most pelvic conditions.

3.—The static current for gynecological application is mainly the static wave current with a metal or a glass vacuum electrode, although static sparks, the static brush discharge and the static induced current are also of value to meet conditions as presented.

4.—Electrotherapy like surgery has a selective field in the realm of gynecology. It does not infringe, nor does it do the impossible. Only by a careful consideration of conditions presented and a selective discrimination of the agency indicated to meet requirements will palliative or curative results follow.

MEAT EATING

An editorial in the *International Med. Digest* for November, 1926, suggests that the unfavorable effect upon nephritis, arteriosclerosis and high blood pressure from the eating of meat is a matter of superstition rather than of demonstrated scien-

tific fact, analogous to the now discredited idea that typhoid fever patients should be starved.

Lieb's careful clinical study of Vilhjalmur Stefansson, the Arctic explorer, showed that, although he had lived for nine years on an exclusive meat diet, at one time going for nine successive months with nothing but fish and water, he had suffered no ill effects upon his cardio-vascular-renal mechanism, but, on the contrary, had been in the best of physical and mental health under those conditions.

Stefansson reports that the Eskimos, living under their normal conditions, are healthy and long lived, and records the cases of other white men who, after years of exclusive meat diet, showed no intestinal toxemia nor disorders of the heart or kidneys.

Careful laboratory tests reported seem to show that nephritics do better on a fairly liberal protein diet.

MANAGEMENT OF MILD MENTAL CASES

Because most physicians dislike to treat mental cases, too many of these patients drift into the hands of the irregulars, declares Dr. Paul S. Johnson, of Richmond, Ind., in the *J. Ind. State M. A.* for November, 1926. He also feels that the physician who knows the case can handle it better than a stranger.

Do not neglect taking a full and detailed history, even though you think you know the patient well. Curious and suggestive points are frequently brought out in this manner—repeated abortions in the patient or the mother; chorea and epilepsy in the family, etc.

To attempt to treat a patient of this kind without letting him know that you regard him as mentally ill, is almost sure to result in the loss of his confidence and consequent failure. It is undesirable to tell him that you consider him insane, but it is well to discuss his condition with him as fully as his intelligence and insight warrant.

Instructions as to diet, exercise and rest should be as detailed and specific as they would be in prescribing medicine. These should be carefully individualized, with special reference to the patient's condition and personal predilections, and no variation should be permitted without adequate cause. It is sometimes necessary to put such a patient at *complete* rest in bed for a few days, but other than this there is a tendency to permit too much rest rather than too little.

The subject of mental rest is best not discussed with the patient. If the relatives and friends are intelligent and will not enervate him with ill-judged sympathy, it is better to treat the case in the environment in which he must function; but it is sometimes necessary to order a complete change of surroundings, especially excluding the people with whom the patient has been associated.

Exercise prescribed should always be *productive* (Dr. Larne Carter). A job suited to the patient's powers is good treatment and an excellent test of his ability to function in his environment.

The nurse on the case must discuss certain matters with the doctor privately, and others in the presence of the patient (this to be directed by the attendant), and she must obey orders exactly. The nurse who puts her own ideas into operation thereby proves her unfitness for handling cases of this character.

Confirmation of recovery and insurance against recurrence is best obtained by the proof, by actual test, that the patient can work.

TREATMENT OF RICKETS AND TETANY WITH IRRADIATED MILK

Experience has shown that various articles of food can be given antirachitic properties by irradiating them with ultraviolet rays for from ½ to 1½ hours.

Dr. Elias S. Halac has made some clinical observations along this line and reported them in the *Bul. de la Soc. de Pediat. de Paris* for May-June, 1926.

The apparatus used was a long tube of quartz in which a high-frequency current was passed in a vacuum, producing ultraviolet rays. The milk to be irradiated was made to flow over this tube, which caused no change in temperature. Exposure to the rays for 45 seconds gave the milk antirachitic properties and rendered it curative against tetany, without imparting any disagreeable taste or odor.

The irradiated milk was given undiluted, with 5 to 10 percent of sugar added, to children 3 to 8 months old, showing symptoms of rickets, in the same quantity that ordinary milk had been fed. After 2 to 3 weeks all showed subjective and objective improvement. Hemoglobin and phosphorus were increased.

The action of the irradiated milk in cases of tetany was even more striking. Laryngospasm disappeared after 3 or 4 days and electric excitability after 7 to 10 days. The blood calcium rose to normal.

It is evident that there is a possibility of curing cases of rickets and tetany in nursing children by feeding them irradiated milk.

MANAGEMENT OF ALLERGIC PHENOMENA

The part played in causing disease by sensitiveness to various foreign proteins is a large one, as outlined by Dr. Nathan S. Schiff in *Ann. Clin. Med.* for October, 1926.

After giving a brief and interesting history of the theories of allergy and a detailed description of the preparation of the various substances used in treatment (specific proteins, peptone, milk and vaccines), Dr. Schiff outlines some practical methods for handling these cases.

In favorable and carefully selected cases, desensitization with the specific protein to which the patient is sensitive gives good results. In many cases it is disappointing.

If vaccines are to be used it is doubtful, in view of the clinical reports, whether those of autogenous origin are superior to the stock vaccines.

Regarding the use of nonspecific proteins (milk or peptone) he says:

"With the widespread use of nonspecific therapy which has been carried out in all forms of diseases, but with particular brilliancy in joint and eye diseases, and with the added evidence of the paraspecific activity of nonspecifics as shown by Peterson and Ling, one is impressed with the potency of this procedure, and is convinced that it deserves a definite rôle in the routine treatment of all diseases where stimulation of resistance is desirable."

Special therapy by means of endocrine extracts, x-rays, calcium (with or without ultraviolet irradiations) and autohemotherapy has given relief in certain special cases and conditions.

Operative measures and a change of climate are by no means always beneficial and their value is a subject of active debate at present.

As a result of his studies and investigations, Dr. Schiff has reached the following conclusions:

1.—All the theories as to the causation of bronchial asthma have been disproved by the tests of time and experimentation.

2.—The methods of determining protein sensitiveness have serious limitations: The cutaneous method because of the marked variability in the potency of commercial proteins; and the intracutaneous method proving too delicate, produce many false reactions, which cannot be differentiated from true reactions; and the elimination of the proteins so designated, does not give the relief of symptoms that should occur.

3.—Positive skin reactions are specific; the best result is obtained when complete subsidence of symptoms follows the removal of the offending protein, and where further contact can be avoided.

4.—A clinical check is advisable, before specific desensitization is instituted, to prove whether or not the positive skin reaction represents the true cause.

5.—Clinical evidence suggests that specific desensitization, if an actuality, is of short duration.

6.—Nonspecific protein therapy has been the most important addition to the treatment of bronchial asthma, especially in non-sensitive cases, or where specific therapy failed to give relief.

7.—The local reaction, following the injection of a protein solution, is the sole criterion as to the efficiency of that preparation; good local reactions are usually followed by clinical improvement, and vice versa.

8.—Market milk, peptone and stock vaccines are the nonspecific agents of choice.

9.—The use of peptone as described seems preferable to specific pollen therapy for the co-seasonal treatment of hay fever.

10.—Various procedures, under certain conditions, have proven of benent in bronchial asthma: For this reason a scheme as outlined, should afford relief to the greater majority.

SARCOMA

When speaking before the Chicago Medical Society on January 5, 1927, Dr. Joseph Colt Bloodgood, of Baltimore, Md., dealt with the rarer form of malignant tumor because he felt that sarcoma has been neglected in the literature of malignant disease. The substance of his remarks and the resulting discussion appeared in the *Bul. Chicago M.S.* for January 8, 1927.

The medical profession should be interested in malignancy because its cure depends upon educating the public to early recognition, and all medical men should be able to cooperate in this program of enlightenment.

To the physician, as well as to the layman, an early sarcoma is merely a "lump", in the skin or underlying structures, and at a time when cure is possible there is no means of telling by the feel whether this "lump" is malignant or benign.

One type of sarcoma develops from preexisting benign tumors, such as lipomas, fibromas, chondromas, etc., and another appears to arise directly from granulation tissue following injuries, chiefly bruises.

The public should be taught that when they find a lump anywhere in the body they should consult a doctor as promptly as they would for a pain in the region of the appendix. The profession must be taught to distinguish between lumps that must be removed at once and those that can safely be allowed to remain.

Two factors have lead to the result that only 10 percent of sarcomas have been cured: First, the public has not been instructed as to the danger of lumps; and, second, the doctors who have had a chance to remove them have not been sufficiently thorough in doing so. There is great need for the wide and complete removal of all tumors, when there is any doubt as to whether they should be removed or not. If the tumor is in a region where wide removal would be mutilating, a biopsy is indicated.

Biopsies should be made of every tumor removed in the operating room and close cooperation between surgeons and pathologists in these matters will result in much benefit to all concerned.

New Books

SHATTUCK: MEDICAL PRINCIPLES

PRINCIPLES OF MEDICAL TREATMENT. *By George Cheever Shattuck, M.D., A.M., Assistant Professor of Tropical Medicine, Harvard Medical School, etc. Sixth Edition Revised and Enlarged. With Contributions by the Following Authors: Joseph C. Aub, M.D., Gerald Blake, M.D., et al. Cambridge: Harvard University Press.* 1926. *Price* $3.50.

There is a tendency now-a-days to lay too much stress upon details of technic and too little upon the great principles which underlie medical treatment, and for that reason a volume like this is especially welcome.

In this little book the principles governing the diagnosis and treatment of disease are stated briefly and clearly and practical suggestions are given for carrying these principles into practice.

The material is grouped into 16 chapters, such as: Disorders of the Circulatory System. Acute Infectious Diseases, Gastrointestinal Disorders, Asthma, Syphilis, Endocrine Disorders, Vaccine Therapy. Medication, etc.

The statements are well-put, up to date and no words are wasted. The book will fit the pocket.

Every medical student should spend many hours in studying some such volume as this, and most physicians, especially the younger ones, need it badly. We recommend this work to all of our readers.

HILL: PROCTOLOGY

A MANUAL OF PROCTOLOGY. *By T. Chittenden Hill, Ph.B., M.D., F.A.C.S., Instructor in Proctology, Harvard Graduate School of Medicine. Philadelphia and New York: Lea and Febiger.* 1926. *Price* $3.50.

This small but handy manual, fairly well supplied with illustrations, covers the subject of proctology sufficiently thoroughly to be of practical value to the general practitioner. The keynote of the book is conservatism.

The author has a kind word for the local treatment of hemorrhoids by means of injections of quinine and urea. While the conservative treatment of pruritus ani by ionic medication is something worth trying out, we cannot quite see the reason for purchasing a special apparatus recommended by the author, as ionic medication can be applied to the anal region with any of the standard appliances now manufactured all over the United States.

We mention a chapter on the surgery of incontinence as being very brief but well written. The diagnosis of ulcerative colitis should have been presented more elaborately instead of being swished over by one clinical illustration, since bloody stools, per se, are not pathognomonic of anything special and are characteristic of a number of serious and less lesions—e;g; carcinoma of the sigmoid.

A chapter on radical operation for carcinoma of the rectum by Robert C. Coffey is one of the longest and best illustrated chapters of the book, replete with valuable information on the therapy of this dreaded malady.

All in all, this is an excellent manual which will prove sufficient for all non-specialistic purposes. The mechanical make-up of the book leaves nothing to be desired.

G.M.B.

WYETH: DIATHERMY IN SURGERY OF NEOPLASMS

SURGERY OF NEOPLASTIC DISEASES BY ELECTROTHERMIC METHODS. *By George A. Wyeth, M.D. New York: Paul P. Hoeber, Inc.* 1926. *Price* $7.50.

The use of the high frequency current, in one form or another, for surgical purposes is a comparatively new addition to our surgical armamentarium, and is far from enjoying the popularity which this electric agency merits. This is due, to a great extent, to prejudice on the part of surgeons, who see in the application of diathermy something alien to classic medicine and surgery.

We must, therefore, welcome Wyeth's book as a very dignified and scholarly exposition of the use of endothermy in accessible neoplasms—a book prefaced by no less an authority than Howard Kelly, of Baltimore, who speaks in the most glowing terms of the "new surgery".

Wyeth handles his matter with the calm of an analyst. His wealth of clinical material is considerable. Of the 137 illustrations in the book, the overwhelming majority are photographs of lesions operated upon and their histopathology. Only a few illustrations are devoted to diagrammatic representations of the high frequency currents, instruments and the technic of endothermy.

After a few introductory chapters, including one devoted to monopolar endothermy, for the removal of moles, warts, nevi and pigmented areas, the bulk of the book is devoted to the destruction of lesions and growths by the bipolar method. The use of the socalled endotherm knife as a means of safe operating for malignant and premalignant growths is discussed in detail, and each group of diseases for which this method of surgery has been used is treated as a separate chapter. The buccal surface, the throat, the rectum, the uterus, urethra, bladder and the entire skin area are treated clinically, methods of operating

and final results being shown, both generally and as special case reports.

All earnest physicians and surgeons who are interested in the new method of removing neoplasms by the agency known as diathermy will find in the present volume a dignified, scholarly and yet distinctly practical guide.

G.M.B.

INTERNATIONAL CLINICS

INTERNATIONAL CLINICS. *A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles by Leading Members of the Medical Profession Throughout the World. Volumes III and IV. Thirty-sixth Series.* 1926. *Philadelphia and London: J. B. Lippincott Company. Price* $3.00 *per volume;* $12.00 *per year.*

These volumes of clinical lectures and special original articles are well known to most physicians, and those who are not familiar with them ought to become so, as they are of the highest value.

The September, 1926, number contains 29 articles dealing with Diagnosis and Treatment; Neurology, Psychiatry and Psychology; Surgery; Travel; and Biography. Articles on Vitamins and their therapeutic importance, acute primary pneumonia, acidosis and alkalosis in children, bronchial asthma and psychoanalysis look especially interesting. There is a biography of Sir Clifford Allbutt.

The December number covers Diagnosis and Treatment; Medicine; and Surgery, with a report of the Cleveland meeting of the Interstate Postgraduate Assembly. Articles on pellagra, aphasia, pelvic infections, prognosis and treatment of heart disease, and fracture surgery, among the 30 in this volume, promise practical assistance.

This series should be helpful to any physician, especially those who are far from the medical centers.

MICHAELIS: HYDROGEN ION CONCENTRATION

HYDROGEN ION CONCENTRATION; Its Significance in the Biological Sciences and Methods for Its Determination. Volume I, Principles of the Theory. *By Leonor Michaelis, M.D., Professor in the University of Berlin, Resident Lecturer in Research Medicine in the Johns Hopkins University. Authorized Translation from the Second Revised and Enlarged German Edition by William A. Perlzweig, M.A., Ph.D., Associate in Medicine and Chemist to the Medical Clinic in the Johns Hopkins University and Hospital. Baltimore: The Williams & Wilkins Company.* 1926. *xiv* 299. 6x9 in. *Price* $5.00.

This is the first of three volumes, and presents the theoretical physico-chemical principles on which the colorimetric and electrometric methods of measuring hydrogen ion concentration are based. Such subjects as the laws of electrolytic dissociation, indicators and electrode potentials are discussed. The author has accomplished the difficult task of presenting material of this sort in such a way that one not particularly familiar with the field may acquire a working knowledge, and at the same time has produced a book that is valuable as a reference text.

The book is verv well arranged and assembled. A notable feature is an abstract at the beginning of each chapter that summarizes the material that is to follow.

The work is recommended to those who desire a fundamental knowledge of the theory upon which the subject of hydrogen ion concentrations rests. The second and third volumes that are to follow will deal with practical methodology and the various applications to colloidal chemistry, general physiology, and medicine.

E. B. V.

PRINTY: SURGICAL TECHNIC

SURGICAL TECHNIQUE. *Edited by Emmet A. Printy, M.D. Illustrations by W. C. Shepard. Published by the Laboratory of Surgical Technique of Chicago.* 1925. *Price* $10.00.

As is generally known, the Laboratory of Surgical Technique of Chicago is a post-graduate school for surgery. The present volume is the outcome of some of the teachings of that school. It is not a book or even monograph, in the common acceptance of the term, but a collection of descriptions and teachings of surgical technics, bound in a loose-leaf cover, apparently with room left for future additions, as is asserted in the foreword.

So far as now published the work comprises nine sections by different authors, though the majority of the work has been done by Dr. Printy. Each section and subsection is illustrated in an artistic style which shows the anatomic conditions, dissections, and operative steps in a manner leaving little to be desired.

The first section begins with a sermon on general surgical technic. This section is truly a masterpiece, the like of which we do not find in most modern text-books on surgery. The principles enunciated must be learned in the operating room, provided one acquire his knowledge there at the side of a master. A discussion of hemostasis, wound suturing, suture material and the like concludes the section; but here we are inclined to the belief that the author has gone into too many details which may confuse the novice, but this, of course, can be offset by the reader selecting the technics which appeal to him as simple and effective for given purposes.

The subsequent sections deal with surgical operations of the thyroid, blood vessels, intestines, stomach, gall bladder and ducts, kidneys and ureters. Subsections consider mammary operations, herniorrhaphies and skin grafting. This in the main concludes the program, which, of course, is not intended to cover the entire field of opera-

tive surgery. But what subjects are taught show the technic in a masterly manner, as each author represents not only the very best Chicago has to offer in surgery but excellent teaching material—a rare combination indeed.

Printy has produced a work of which he can well be proud. While here and there a persistent typographic error could have been avoided ("forcep" for "forceps"), or an illustration should have been described as "ready for operation" rather than "ready to operate", these are minor shortcomings which are mentioned solely in the interest of good scholarship, which has been too long neglected in our professional literature.

Perhaps the best tribute that can be paid the book is that even experienced surgeons will find much in it to enable them to attain perfection in surgical technic.

G.M.B.

SIR WILLIAM OSLER

SIR WILLIAM OSLER MEMORIAL NUMBER: APPRECIATIONS AND REMINISCENCES. Bulletin No. IX of the International Association of Medical Museums and Journal of Technical Methods. With a Classified Annotated Bibliography. *Edited by Maude E. Abbott, M.D., McGill University. Privately issued at 836 University Street, Montreal, Canada.* 1926. *Price* $10.00.

This is a splendid collection of articles concerning the life and work of the greatest of modern clinicians, written by men who were closely associated with him and knew him well. Each phase of his many-sided character is treated by those best qualified to understand it.

Throughout the book are illustrations showing Osler's development and the scenes and modes of his varied activities. These alone constitute a valuable historical document. A bibliography of all of Osler's works is part of the volume.

No physician can fail to be inspired and uplifted by these tributes, by the foremost medical men of this generation, to one whom they all recognized as a genius in their own field of work.

The first imprint of 1,500 copies is now almost exhausted and a second imprint is in process of preparation.

LEADBEATER: SCIENCE IN RELIGION

THE SCIENCE OF THE SACRAMENTS. *By Charles W. Leadbeater. Regionary Bishop of the Liberal Catholic Church for Australia. Los Angeles, Cal.: The St. Alban Press.* 1920. *Price* $4.50.

A good many books have appeared lately dealing with the close relation which is now felt to exist between religion and science, but we have seen nothing at all like the present volume, which assumes the reality of the unseen world as a fact and proceeds to explain the purposes and results of ritualistic worship as a definite and scientific means for establishing contact between man and God.

It may be stated here that the Liberal Catholic Church has no connection with the Roman Catholic and resembles it only in the titles of its clergy, the use of an elaborate and beautiful ritual in its services, and its recognition of the seven great Sacraments.

Upon the assumption that there was some concrete reason why certain kinds of vestments and altar decorations were originally used and why certain formulae were said and certain acts performed in connection with worship, the author proceeds to show why all these things are done and what effects are produced in the higher realms of consciousness when the ritual is properly carried out. Especial stress is laid upon the ceremony of the Holy Eucharist, which is, of course, the keystone of the arch of Christian worship. The other sacraments are, however, fully considered.

The book has a number of illustrations showing the various vestments and altar arrangements and explaining their symbolism; as well as several others setting forth the appearances which are seen by clairvoyant vision at various stages of the eucharistic or communion service.

Whether or not one accepts the author's premises, this work is of great interest as a logical explanation of the benefit which many people undoubtedly derive from engaging in ceremonials, whether of the Church or of Masonry or some other group or organization, and as the only coherent statement of the reasons for many ceremonies which have come down to us from long-past generations. If the premises are granted the conclusions are inevitable, as the book is consistent with itself.

A study of this contribution to the science of religion ought to prove of great value to anyone who is at all interested in the general subject. Roman Catholics will find the ceremonies they love described and elucidated in a sympathetic and reverent manner; while Protestants will be able to study the ritual which has held the attachment of millions of people for nearly 2000 years, apart from the dogmas which many find themselves unable to accept or even tolerate.

Whether we believe the statements made or not, this book will set us thinking along some wholly new lines and should do much to foster a spirit of sympathetic tolerance among the Christian sects which are all too prone to misunderstand and vilify each other in a thoroughly unchristian manner.

GROUP STUDY FOR PARENTS

"Group Study for Parents" is the title of a new pamphlet that has just been issued containing practical suggestions for parent-teacher associations, women's clubs, and other organizations interested in child study. It deals with (1) best methods of organization; (2) interesting programs for meetings; and (3) recommended books in child study.

The pamphlet explains why mothers and fathers should organize in groups to study the difficult problems that arise in the rearing of children. It advises concerning the size and make-up of groups, the time and place for meetings, officers and organization procedure. It also points out why some groups go wrong. It suggests subjects for discussion and ways to make the programs most valuable to the members.

The list of recommended books on child study is divided into seven classifications: (1) General, (2) Health and Feeding, (3) Sex and Adolescence, (4) Child Psychology, (5) Education, (6) The Family and the Race, and (7) Fiction Interpreting Child Life.

The pamphlet is by Eva V. B. Hansl. It is published by *Children, The Magazine for Parents*, 353 Fourth Avenue, New York, N. Y., and may be obtained for ten cents.

PANCOAST AND PENDERGASS: PNEUMOCONIOSIS

PNEUMOCONIOSIS (SILICOSIS). A Roentgenologic Study with Notes on Pathology. *By Henry K. Pancoast, M.D. and Eugene P. Pendergass, M.D. New York: Paul B. Hoeber, Inc.* 1926. *Price* $4.00.

The effects on the lungs of mine workers and similar industrials of certain forms of dust is of special interest, not only to roentgenologists but to all clinicians. The authors, who have done pioneer work in this investigation, from a roentgenologic point of view, have presented their findings in the present small volume, which, however, as the title implies, are not restricted to the roentgenologic aspect of the problem.

After reviewing the nomenclature they discuss the different kinds of dust affecting certain workers, the preventive measures, pathology and coincidence of tuberculosis and occupations. All this is very practical and useful of course, but the great value of the book lies in the diagnostic help afforded by 23 full-page x-ray plates, which show the lesions almost as plainly as one can get them from the original negatives.

The book betrays high scholarship. A number of bibliographic reference will prove of great value to those specializing in diseases of the lungs.

G.M.B.

KELLOGG: ITINERARY OF A BREAKFAST

THE ITINERARY OF A BREAKFAST. *By John Harvey Kellogg, M.D., Medical Director of the Battle Creek Sanitarium. Revised Edition. New York and London: Funk & Wagnalls Company.* 1926. *Price* $1.75.

The subtitle of this book is as follows: "A Popular Account of the Travels of a Breakfast through the Food Tube and of the Ten Gates and Several Stations through Which It Passes, also of the Obstacles Which It Sometimes Meets."

The author states that modern medical research has clearly incriminated the colon as the source of more disease and physical suffering than any other organ of the body. He states further that the artificial conditions of civilized life have produced a crippled state of the colon as an almost universal condition among civilized men and women.

The book deals in detail with waste disposal. Three defecations per day are advocated.

It is intended for the general public, but the physician can, however, acquire the latest thought on a subject which is receiving considerable popular and professional discussion—intestinal autotoxemia.

F. J. H.

SAMPSON: PHYSIOTHERAPY

A PRACTICE OF PHYSIOTHERAPY. *By C. M. Sampson, M.D., Formerly of the Physiotherapy Service, Walter Reed U. S. Army General Hospital, Washington, D. C.; etc. With 146 Illustrations. St. Louis: The C. V. Mosby Company.* 1926. *Price* $10.00.

Here is a book which seems to cover pretty much the whole ground, by a man who has had a very extensive experience in the use of all the various physical agencies in treating all sorts of disease conditions.

He lays the greatest stress upon the importance of a broad and thorough foundation of general medical knowledge, as a prerequisite to the successful practice of physical therapy, and upon the absolute necessity of completely mastering the theory and technic of any apparatus that is to be used.

The first 110 pages are devoted to an exposition and discussion of the physics and physiology of the various physical agencies, with their relative merits and fields of application.

He then takes up the various agencies, one by one, and considers them in greater detail, constantly enlarging upon the fine points of technic. Diathermy — including autocondensation and the nonvacuum electrode, infrared, static electricity, ultraviolet rays, x-rays, galvanic and faradic currents, the sinusoidal current, massage and hydrotherapy are thus dealt with, *in extenso*.

Nearly 200 pages are devoted to the clinical application of physical agencies, the various diseases being listed alphabetically, with special chapters on acute gonorrhea in the male, peripheral nerve wounds, arthritis, locomotor ataxia, pyorrhea and hay fever.

The last section has chapters on "trouble shooting", adapting physical therapy to general practice, general considerations and definitions. The index appears to be satisfactory.

The style, throughout, is conversational to the point where, in spots, it is almost slangy — a distinct departure from usual textbook practice—but the author says what he has to say without wasting words and with the certainty which comes from long and extensive experience. The whole book frankly expresses the writer's personal opinions as to details and asks no man to follow them slavishly *after he has mastered the fundamentals*. It is an easy book to

read, but one must not be misled by its colloquial presentation into thinking the subject presented is easy to get hold of.

Mechanically the book is good. Plate paper and clear type are used, and illustrations appear when something *needs illustrating*—not for the purpose of reproducing the catalogues of the instrument dealers. The binding is none too strong for a rather heavy book which will probably receive hard use.

This seems to be one of the most complete and authoritative works on physical therapy in general which we have seen, and it can be recommended to those who have had considerable experience in the work as well as to beginners.

COUSINS: PHILOSOPHY OF BEAUTY

THE PHILOSOPHY OF BEAUTY. A Western Survey and an Eastern Contribution. *By James H. Cousins, Doctor of Literature of Keiogijuku University, Tokyo; Member of the Academical Council and Faculty of Arts of Madras University; Principal of the Brahmavidyashrama, Adyar, Madras. Adyar, Madras, India: Theosophical Publishing House.* 1925. *Price* $1.00.

All truly civilized people now realize that beauty is an essential part of a rich and satisfying life, but most of us are content to seek for it and, having found it, to contemplate it with joy without giving much thought to why we consider it beautiful.

A few, however, find pleasure in the study of the nature and philosophy of beauty. This little volume is for those few. It traces the history of aesthetics from the time of Plato, in the West, and Confucius, in the East, down to the modern philosophers and shows the profound influence which religion and ideals of beauty have had upon each other in all ages.

Not easy reading, but worth the effort to those who care to travel the delightful byways of culture.

BLUM: PRACTICAL DIETETICS

PRACTICAL DIETETICS FOR ADULTS AND CHILDREN IN HEALTH AND DISEASE. *By Sanford Blum, M.D. Philadelphia: F. A. Davis Co.* 1926. *Price* $4.00.

As the title implies, this book is practical. But aside from this the work has a number of advantages which should make it popular one with the medical profession. First of all stands out the fact that all theoretic discussions are conspicuous by their abscence and, second, because the subject matter has been effectively organized and presented in a manner which leaves no room for misunderstandings.

The book is divided into two principal parts, the first dealing with the diet of adults and the second with that of infants, children and adolescents. The diseases and conditions necessitating the control of a dietary regimen are arranged in alphabetical order; e.g. anemia, appendicitis, etc., and menus provided for definite periods. But the menus are not iron-clad, the reader being furnished with the underlying principles. Types of menus render the book at once practical and highly scientific. The dietary for infants and children is carried through in the same logical manner.

The author deserves great credit for having invited the attention of the profession to the need of being specific when giving a patient directions what to eat and what not to eat. Vague suggestions, such as to avoid meats, starches, and the like, can only serve to mislead and confuse the patient, with inevitable bad effects. Surgeons will find definite instructions for postoperative feeding.

Here, then, we have a mechanically splendidly gotten up book with large type on good paper, that should be on every physician's desk for frequent reference. By copying menus for given conditions the physician will be relieved from the need of working out a dietary for different conditions or even for different periods.

G.M.B.

BAINBRIDGE: THIRD INTERNATIONAL CONGRESS OF MILITARY MEDICINE AND PHARMACY

REPORT ON THIRD INTERNATIONAL CONGRESS OF MILITARY MEDICINE AND PHARMACY, Paris, April, 1925. *By Commander William Seaman Bainbridge, M.C., United States Naval Reserve Forces, Member of Permanent Committee, Delegate from the United States. Reprinted from The Military Surgeon, May to August,* 1926, *inclusive. Washington, D. C.* 1926.

PORRITT: OBSTETRIC ABDOMEN

THE ABDOMEN IN LABOUR. Being a General Practitioner's Clinical Study of the Parturient Abdomen. *By Norman Porritt, M.R.C.S., L.R.C.P. (Lond.). New York & London: Oxford University Press.* 1926. *Price* $1.75.

This is a small book of a little over seventy pages of text, well-bound in the usual Oxford Medical Publications style, which can be read through and digested in one evening. Any one interested in modern obstetrics will be rewarded for the small effort by a deep and lasting impression of the lessons taught in this little brochure.

It is not because the work contains anything startingly new, the author himself laying no claim to special originality, but it is the manner in which certain lessons are emphasized that makes this essay valuable; an essay, by the way, which was awarded a prize by the British Medical Association.

The author preaches a strong and convincing sermon to leave the parturient vagina alone and to control the diagnosis of progressing labor by a study of the mother's abdomen, with a view to reducing puerperal septicemia to the minimum. This applies not only to trained obstetricians but particularly to partly trained personnel, such as midwives. The author shows in a brief and lucid manner, by text and dia-

grammatic sketches, how to recognize almost all obstetric situations by observing the mother's abdomen. We feel certain that the perusal of this little work will prove of great benefit in more than one respect.

BETHEA: MATERIA MEDICA AND PRESCRIPTION WRITING

PRACTICAL MATERIA MEDICA AND PRESCRIPTION WRITING. With Illustrations. *By Oscar W. Bethea, M.D., Ph.G., F.C.S., Professor of Clinical Therapeutics, Tulane School of Medicine; etc. Fourth Revised Edition. Philadelphia: F. A. Davis Company.* 1926. *Price* $4.50.

A good book, of moderate size, on this important subject, revised to correspond to the U. S. P. X. The paper is good, the type clear and the arrangement of the matter open and well subheaded, to facilitate reference.

The section on prescription writing is especially complete, filling about 150 pages, and contains much important information which many physicians appear to lack. The book is worth buying for this alone.

A general index and also a clinical index add materially to the value of the work.

Recommended to any physician who has no up-to-date volume on materia medica or who needs to brush up on prescription writing. The demand should be heavy.

KOPELOFF: WHY INFECTIONS

WHY INFECTIONS? In Teeth, Tonsils, and Other Organs. *By Nicholas Kopeloff, Ph.D., Associate in Bacteriology, Psychiatric Institute. New York and London: Alfred A. Knopf, Inc.* 1926. *Price* $2.00.

The author makes it understood that "infection takes place whenever microorganisms can remain and multiply in considerable numbers after they have entered into the body tissues."

This book is, no doubt, intended for the layman as well as for members of the medical and dental professions. Scientific terms are explained and the book made understandable without difficulty by the reader who may not have studied medicine.

The author does not claim that the material in this book is entirely original. He has written up the subject of infections in an interesting though critical manner.

The infections of teeth, tonsils, adenoids, nose, sinus, ear and eye, and the internal organs are discussed.

What the author declares to be a trend toward wholesale removal of teeth, tonsils and adenoids is denounced. He says, "Until more knowledge has been acquired as to the true function of the tonsil, let it not be needlessly sacrificed to a fad." And also, "The age of specialization stimulates surgery."

The author does not feel that the removal of teeth and tonsils is often necessary in the cure of physical or mental disease. He says, "An accurate diagnosis of chronic septic foci based on the broad and secure ground of general pathology will alone save the profession from the invasion of recklessness in the removal of teeth, tonsils, and other organs."

A word of advice to laymen is given in the following paragraph, "Keep your organs intact. Remove them if they cannot be restored to health, but for no other reason. General care, drugs, serums, vaccines, and other preparations may all be utilized in the battle against infection."

F. J. H.

BUNDESEN: PRENATAL CARE

BEFORE THE BABY COMES. *By Herman N. Bundesen, M.D., Commissioner of Health, Chicago. Chicago Department of Health Weekly Bulletin, Vol. xx, No.* 50, *December* 14, 1926.

The Department of Health of the City of Chicago has issued this little book, compiled by Dr. Bundesen, the Health Commissioner, to help expectant mothers, and it is one of the best things of the kind that we have seen.

Directions are given to the pregnant woman regarding her diet, dress, exercise, care of the breasts and all other matters of importance and she is specifically advised to go to her doctor as soon as she knows she is pregnant. The dangers of toxemia are explained, and the fact is stressed that the physician can frequently prevent grave complications if he has a chance.

The advantages of hospital confinement are explained and a list of things needed for mother and child is given. If the patient is to be confined at home, full details of all necessary preparations are furnished.

The hygiene of the puerperium is discussed.

If every prospective mother could have one of these books and would study it, it should go far toward reducing the infant and maternal mortality.

It is probable that any physician can secure one of these books by writing to the Department of Health, Chicago, Ill. At any rate, he can obtain prices on single copies or in quantity. We advise every man who is doing obstetrical work to give a copy to every woman who engages him to attend her in confinement.

Medical News

NEW BUILDING FOR MAYO CLINIC

The building now housing the Mayo Clinic has become inadequate for the constantly growing work of that institution and a new building, to cost three million dollars, is now being erected. The architect's drawing of the new clinic building is shown above.

SYNTHETIC SAUSAGE CASINGS

The traditional "tub of guts" of the sausage maker will shortly be a thing of the past, and the festive "hot dog" will wear a cotton nightie.

The chemists of the Mellon Institute of Industrial Research have at last succeeded in making satisfactory sausage casings out of cellulose in the form of cotton linters. These casings are reported boilable and free from the danger of putrefaction.

AMERICAN COLLEGE OF PHYSICIANS

The annual meeting and clinical week of the Ameican College of Physicians will be held at Cleveland, Ohio, February 21 to 25, 1927. This is one of the most important and valuable medical meetings of the year and all who can do so should arrange to be in attendance.

For full particulars address E. R. Loveland, Executive Secretary, 37th and Chestnut Sts., Philadelphia, Pa.

WOODROW WILSON ESSAYS

The Woodrow Wilson Foundation is offering two prizes for the best essays on the subject, "What Woodrow Wilson Means to Me", the essays to contain not more than 2,500 words.

The contestants must be residents of the United States, men or women, between 24 and 35 years old. A prize of $25,000 goes to the best essay by a man and a similar prize to the best one written by a woman. All articles must be received on or before October 1, 1927.

Full particulars regarding this interesting contest may be obtained by addressing the Foundation at 17 East 42nd St., New York, N. Y.

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DR. PIERRE VACHET

The little apothecary who achieved world-wide renown by his "Every day, in every way—", Emile Coué, has gone to his re-

ward, but his cult or system lives after him, headed by his former disciple and present successor, "Dr." Pierre Vachet (one wonders what he is "doctor" of). Dr. Vachet has promulgated something of his own, which, we understand, he calls "moral serum".

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ALEXANDER S. HOROVITZ

There has been a good deal of talk lately about an alleged remedy for drug addiction, known as "Narcosan" and promoted by Alexander S. Horovitz, a chemist.

Drs. Lambert and Tilney recently published an article reporting good results from the use of this remedy, whose formula is secret, though it is said to contain vegetable lipoids.

The New York Health Commissioner, the director of the New York Neurological Institute and other prominent physicians are not so enthusiastic. They feel that the most that can be claimed, so far, for the remedy is that it ameliorates the symptoms of withdrawal of the drug. No sound proof that it actually cures these cases has yet been produced. Of course, one must remember that drug addicts are unstable characters at best.

© Keystone View Co.

$100,000 REWARD FOR CANCER CURE

William Lawrence Saunders, Chairman of the Board of the Ingersoll-Rand Company, recently announced that he would give $50,000 to the person who will "discover what human cancer is and how it can be positively prevented", and another $50,000 for the discovery of "an absolute cure for human cancer".

THE SHEPARD-TOWNER BILL

The distressing and un-American Shepard-Towner bill is again being agitated and all physicians should inform themselves as to its provisions and the results obtained (or the lack of them!) and do his part in getting this law off of our books.

One interesting fact is that the State of Montana is reported to have the lowest birth rate and the highest septicemia rate in the Nation—and this is a state where the Children's Bureau has had full swing for five years!

Write to your Congressman or Senator for a copy of the bill and for statistics regarding its operation; or you can get full particulars from the Bureau of Legal Medicine of the A.M.A., 535 N. Dearborn St., Chicago. Study this material and see where we are heading, and then DO SOMETHING.

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